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ABSTRACT

The effectiveness of the Block Plan, developed and implemented by the seventh grade students at Edith Rogers Junior High School in Edmonton, Alberta (Canada) was investigated. The Block Plan uses the concept of a pair of teachers assigned to two classes of students for the homeroom period plus a pair of teachers assigned for each of four academic core subjects. The main features of the Block Plan include flexible scheduling, joint planning, special attention given to the teacher's role in student counseling and reading, use of community resources, integrating subject areas, and the use of a differentiated support option for remedial coursework. The Block Plan was designed to be especially effective in overcoming problems that students encounter in making the transition from elementary school to a large junior high school. The implementation of the program was monitored on two levels: (1) product, concerning student attendance, attitudes, and achievement; and (2) process, the teachers' reactions to the program as it was being implemented. Results were positive for both attendance and attitude measures, and most achievement measures also favored the Block Plan. However, several weaknesses in the implementation emerged from the teachers' responses in such areas as joint planning and the differentiated support option. Copies of the surveys are attached. (FG)

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THE BLOCK PLAN

AN ALTERNATIVE APPROACH TO THE NEEDS OF JUNIOR HIGH SCHOOL STUDENTS

Final Report 1981

SOL E. SIGURDSON

U.S. DEPARTMENT OF EDUCATION
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Project Director
R.B. Vaughan, Principal

An Edmonton Public Schools Project
Jointly Funded by
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ABSTRACT

The project, An Alternative Approach to Meeting the Needs of Junior High School Students, involved conceptualizing, developing and implementing the Block Plan in grade seven at Edith Rogers Junior High School, Edmonton, Alberta. It consisted of monitoring the outcomes of this implementation plus developing a *Block Plan Grade Seven Instructional Manual* and a *Differentiated Support Option Handbook*. These two documents appear under a separate cover and are available from Alberta Education, Edmonton, Alberta.

The monitoring reported in this *Final Report* outlines the main features of the Block Plan, the teachers' reactions to the program and its implementation and an examination of several student, parent and teacher outcomes.

The Block Plan utilized the concept of a pair of teachers being assigned to two classes for the homeroom period plus the four academic core subjects. The typical pair was language arts–social studies and mathematics–science. The main features of the Block Plan include many aspects such as flexible scheduling, joint planning by teachers, special attention to the teachers' role in student counseling and reading, use of community resources, integrating subject areas and the use of an option as a "support course." The support course is essential to the Block Plan in that it allows the use of heterogeneous grouping for all classes in the grade. Implemented only at the grade seven level, the Block Plan was designed to be especially effective in overcoming problems that students encounter in making the transition from elementary school to a larger junior high school.

The teachers' reactions pinpoint several weaknesses in the implementation procedures and indicate significant departures from what might be considered an "ideal" Block Plan. For example, joint planning by the teachers in the Block pairs fell short of initial expectations. Also, the full potential of the differentiated support option was probably not reached for reasons of lack of agreement on the goals of the support option and lack of extensive cooperation among teachers. The suggestion is that much can be done to further understand the instructional processes of the Block Plan.

The results of the attitude to school and achievement measures favour the Block Plan over the control. In the attitude domain, the results consistently favour the Block Plan. In achievement, the low group (bottom 35% in achievement) did much better under the Block Plan in mathematics, language arts and reading comprehension. However the high-average group

mathematics, language arts and reading comprehension. However the high-average group achieved better in language arts in the control. The gains then achieved by the Block Plan in attitude for the total group and achievement for the low group appear to be off-set by achievement in language arts for the high-average group (top 65% in achievement.) In other words, high-average students do better in language arts in a departmentalized situation.

The conclusion is that if the Block Plan could be modified to give more help to high-average students in language arts, it would be much superior to a departmentalized instructional organization. Even left as it is, it shows much promise for large junior high schools.

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Gary Lilley
Ed Simbalist
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Marilyn Webber

We hope the program and this report justify their effort and confidence.

Sol Sigurdson
Bruce Vaughan

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Description of The Study

BACKGROUND

Edith Rogers Junior High school is a large school in a diversified community in Edmonton, Alberta. This typically departmentalized school had been experiencing considerable student behavior difficulties especially in grade seven. The school administration became concerned with attendance, attitude of the students and general school conduct. The exclusion of students from classrooms and school suspensions were at a high level in grade seven. These difficulties seem to stem from students' being unable to make the transition from a self contained grade six classroom to the departmentalized grade seven situation, from the large number of students who came from homes unable to give them the necessary support and from the general behavior of the typical junior high school entrant in this community.

Besides the administration, teachers likewise were expressing concern over the attitude of their classes. The extremely wide range of ability that existed in some of their classes made effective instruction difficult. The school program placed most problem learners (differentiated students) into three classes (and as such these students accounted for about 20% if all students in these classes) for the convenience of scheduling mathematics and language arts remediation classes. These three classes consisting as they did of 20% very slow students became problematic for science and social studies teachers.

The teachers in the school initially thought the problems of attitude and the problem inherent in teaching to a wide range of ability could be solved by ability grouping . A consideration of other schools' experiences in this area (9), (14) led to a search for alternative patterns of instruction. Of the number of alternative patterns for instruction which are currently in use in "schools for the middle grades" the teaching staff (especially the eight teachers who would be involved most directly with the grade seven program) felt a system of instruction which increased teacher-student contact would be advantageous. Such a system would represent a move away from the departmentalized set up then in practice in the school.

THE BLOCK PLAN

The block system in some form as an alternative pattern for instruction is well established within recent developments in the middle school (10). Although some investigations have been carried out, the evidence does not conclusively support any particular version of the system (11), (21). At any rate most of the studies have been carried out in settings in the United States where the community and educational structure are rather different than our Canadian settings. Studies of junior high schools made in Calgary (6), Red Deer (24), Saskatchewan (25) and Manitoba (17), all lend support to a block system (a cooperative teaching approach). There were several factors in the situation at Edith Rogers Junior High School that suggested a block system might be appropriate.

1. The impersonal nature of the school, due to its size, and the diversity of the community, are factors which the block system is designed to off-set. Grouping fifty-five students with two teachers (not all in the same physical space) for almost two-thirds of the school day could give all grade seven an identity and a sense of belonging which should improve their attitude toward the school and to each other.

2. Problem learners in grade seven constitute approximately the lowest 10% of students. These students are judged to be two grades behind in mathematics and/or language arts. Although these students could benefit from being members of heterogeneous classes a method of supporting them especially in mathematics and language arts was deemed necessary. The program (The Differentiated Support Option) to do this was scheduled within the option time slot for two periods per week for each of the two subjects. For these students, it means sacrificing an option which some of them would have enjoyed and which others would have abused. The option program provided a mechanism, then, for supporting the regular core program.

3. A block system seemed appropriate in this situation because we wanted a scheme which would allow significant teacher input into the running of their classes and the development of the program. We also felt the block system gave freedom from the regular school timetable to do extended activities both in and out of school. The block system, then, is a way of giving teachers greater say in their timetable, greater flexibility in using the timetable and greater control of the program at the grade level.

General features

The essential features of the Block Plan were agreed upon by school personnel before the study began. The main agreement was for heterogeneously grouped classes with teachers assigned to teach the four academic core subjects in pairs. In this way eight teachers would form a grade seven teaching group. The principal agreed to assign 180 minutes per day to the teaching pairs with the two classes. Beyond this, the teachers would make up their own schedules for these classes. Their other teaching responsibilities would be assigned as usual. Also integral to the initial plan was the support course to help the slow students function in the heterogeneous classes. The main thrust of the Block Plan was to give individual teachers greater contact with and greater responsibility for the students in their homerooms. They would take greater responsibility for the personal-social dimension of the student's school life and also for the student's general learning skills such as reading and writing. The details of the program were to be developed through workshops as part of the study. The Block Plan program is fully described as part of the Design of the Study.

PURPOSE OF THE STUDY

The study consisted of developing and implementing the Block Plan in all its detail in one large junior high school at the grade seven level only and monitoring the effects of this implementation. In monitoring, we sought reactions from students, parents, and teachers. The areas monitored were:

1. disciplinary actions taken by teachers during the school year
2. student attitudes to classes and teachers
3. student achievement
4. parental reaction to their child's schooling
5. teacher reaction to the program and its implementation.

Looked at slightly differently, the purpose for the monitoring was first first of all to establish what effect the Block Plan had on students' attitudes and then to examine several other aspects of the student, parent and teacher reaction. We were especially on the lookout for any negative side effects of the program.

Program development consisted of working out new teaching procedures, ways of working cooperatively with other teachers and developing new rules in counseling. Specifically teachers were asked to develop a Block Plan Manual of interdisciplinary units and a Handbook

for the Differentiated Support Option.

Areas monitored

Implementing a major instructional change in a school program over the course of a full school year could have far-reaching effects. An important effect would be the effect on the teachers. The effect the implementation has on the teachers is especially important since many aspects of the program would be implemented only at the teachers' initiative. Another effect, and ultimately the most important one, is the effect on the students. Parents could in fact, feel some of the impact of the program. With these three groups of people in mind, a series of questions were framed to guide our monitoring.

1. Was student attendance at school affected?
2. Did teachers' methods of disciplining students change?
3. Did student attitudes to their classes, teachers, administration, classmates and school change?
4. Did achievement in mathematics, language arts and reading change?
5. How did parents react to these changes? Did they perceive any differences?
6. Was the teachers' attendance at school affected?
7. Did teachers over the year change any of their attitudes toward certain aspects of school?
8. How did teachers perceive the program as it was being implemented? What was their reaction to the innovation during the implementation?

Program background

A Block Plan Manual to be developed in the course of the implementation was to consist of eight interdisciplinary units combining social studies, language arts, science and/or mathematics plus other suggestions for teaching/administrative/counseling procedures which proved effective.

A handbook for the Differentiated Support Option was to consist of separate handbooks for mathematics and language arts with suggestions for student selection, administration, instructional procedures, and actual activities for use in the support option.

In addition to these two documents program development occurred in a series of workshops designed to help teachers specify more explicitly the many aspects of the Block Plan.

DEFINITION OF TERMS

Block system: any pattern of instructional organization which puts teachers and students together into groups for certain blocks of time.

Block Plan: the particular block system used in this study which has teachers working in pairs and employs a "support" course for problem learners.

Block pair: Each teacher in the Block Plan was paired with another teacher. These two teachers are referred to as block pairs.

DSO: the differentiated support option, a support course which operates both in mathematics and language arts in the option slot in the timetable.

EPS: Edmonton Public Schools documents were used in several places in the study. The school site for the study was an EPS school.

High-Average group: Students in this group were those who scored higher than the 30th percentile on Edmonton Public Schools standardized tests in mathematics and reading given in grade six. In this study, this consisted of the top 65% of the total group.

Low group. Students in this group were those who scored lower than the 30th percentile on Edmonton Public Schools standardized tests in mathematics and reading given in grade six. In this study, this consisted of the bottom 35% of the total group.

Problem learners: approximately the lowest 10% of the grade seven class, sometimes referred to as differentiated students.

Slow-learner group: Students in this group were those scored lower than the 20th percentile on the Edmonton Public Schools standardized tests in mathematics or reading given in grade six. In this study, this consisted of the bottom 20% of the total group.

Design of the Study

The design of the study divides into two phases: program development and monitoring. Program development involved developing the goals and procedures for the Block Plan by the administration and the teachers and constructing guidelines for the Block Plan manual and the D.S.O. handbooks. Monitoring did not directly involve anyone except the research director, his assistants, and a non-project interviewer.

PROGRAM DEVELOPMENT

During August, 1980 the teachers met for three days of workshops wherein they could learn more about the Block Plan and go on to input their own ideas. The teachers, for example, met with the administration to work out the structure for the D.S.O. They met with their block pair to work out their timetables and to begin planning for any joint activities. In addition to these administrative activities teachers along with outside session leaders met to discuss the following topics:

General
1. Nature of adolescents
2. Goals of the Block Plan

Organizational
3. Realizing the full potential of block scheduling
4. Working cooperatively with your block partner and other block teachers
5. The role of the administration in the block plan

Curriculum
6. Reading in content areas
7. Language arts skills in content areas
8. The Differentiated Support Option program

Instruction
9. Interdisciplinary units
10. Community resources - field trips
11. Teaching strategies for mixed ability classrooms
12. Teaching mathematics and language arts to utilize the support option

Counseling
13. Developing cohesiveness in adolescent groups
14. The teacher as a primary counselor
15. Closer home contact by teachers

Several of these topics were also dealt with later in workshops during the year. Of all these topics special emphasis was put on interdisciplinary units, reading in content areas, the differentiated support option, and the whole area of counseling. The administrative personnel and the guidance counselors in the school participated in many of these workshops.

The emphasis in all workshops was to encourage the teachers to bring their own background knowledge and experience to bear on the discussion. None of the sessions were approached in a "training-for-the-job" sense. If the Block Plan was to realize its full potential, teachers would have to understand its every dimension and apply their own imagination and energy to bring out the best in it. During these sessions several directions for the Block Plan were articulated. These directions are given below in the section "A Description of the Block Plan".

Block Plan manual and D.S.O. handbook

In addition to the general program development of the workshops guidelines were set up for the writing of the *Grade Seven Instructional Manual* and the *Differentiated Support Option Handbook*. The details of the guidelines appear in the *Manual*[1] and the *Handbook*[2] which are presented under separate cover. For both documents, teachers worked individually or in pairs and were instructed to write only on those units or procedures which they actually used in the classroom. The research director recommended a format to follow but otherwise the teachers had only their knowledge of the Block Plan and some general guidelines to follow. The rationale for this approach is that the teacher-produced document, given a consistent format, would be more readily accepted by other junior high school teachers and more easily implemented by them.

The *Manual* consists of suggested activities for teachers in a Block Plan arrangement. Besides many general teaching suggestions, the *Manual* contains eight fully described interdisciplinary units dealing with at least two of the four core subjects, mathematics, science, language arts and social studies. The unit topics are:

The Beaver (science and language arts)

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[1] *Block Plan Grade Seven Instructional Manual*, Alberta Education, Province of Alberta 1981.
[2] *The Differentiated Support Option Handbook*, Alberta Education, Province of Alberta 1981.

Both of the above documents are available free of charge from Planning and Research, Alberta Education, Devonian Building, 11160 Jasper Ave., Edmonton, Alberta T5K OLZ

Dairy Farming (science, mathematics and language arts)

Disasters (social studies, science and language arts)

Multiculturalism (social studies and language arts)

Plants – Rate, Ratio and Percentage (science and mathematics)

Library Research Reporting Skills (language arts, social studies and science)

Wheat Farming in Western Canada (social studies, language arts and science)

Who Am I (social studies and language arts)

The *Handbook* consists of a discussion of the concepts of the Differentiated Support Option plus materials and suggested activities for use in (i) a language arts differentiated support system and (ii) a mathematics differentiated support option.

A description of the Block Plan

The grade seven enrolment, being 210 students, was divided into eight classes. The total time assigned to the academic core per class was to be 20 periods (6–language arts, 4–social studies, 5–mathematics, 5–science.) A third given parameter was that about 10% of the enrolment would be given extra help in language arts and mathematics. Within these conditions, the following 10 guidelines were used in setting up the Block Plan for the grade seven classes: students and teachers.

1. All eight grade seven teachers are paired, making 4 blocks, each block being assigned 55 students.
2. Each teacher will teach two subjects such as Language Arts–Social Studies or Science–Mathematics.
3. Teachers are assigned in pairs according to teachers' preferences for a colleague and subject areas.
4. All students are assigned heterogenously to the eight classes.
5. Each teacher has one of the classes in the block for a homeroom.
6. Each pair of teachers are essentially assigned to their group of 55 students for 180 minutes per day. This "block" assignment will mainly occur as a block of time, probably from 9:00 to 12:00.
7. Teachers within each block will be allowed to schedule their own time for subjects.
8. Teachers will act as primary counselors for students in their homeroom. Teacher pairs will

be encouraged to discuss and share perceptions of all of the students assigned to them.

9. A *Differentiated Support Option*[3] will be designed to assist the "differentiated student" in language arts and mathematics.
10. A single period per week in guidance will also be offered for each homeroom.

In addition to these particular initial guidelines, as the workshops progressed several other directions were articulated and generally accepted by the grade seven teaching group and the administration. The general direction of the Block Plan would be to:

1. Minimize the problems of adjustment of students to junior high school.
2. Make a bigger commitment to the emotional, social and general learning of students as opposed to a heavily cognitive emphasis.
3. Use flexible scheduling to best advantage, avoiding the pitfall inherent in longer periods of contact with students.
4. Achieve a spirit of cooperation among teachers which could yield improvement in program articulation (between core classes and between the core class and the D.S.O.), and in counseling of students.
5. Give teachers a greater responsibility for the education of their students and, perhaps give them greater independence from the central school administration.
6. Allow teachers to know their students better and thereby be more aware of difficulties in subject matter areas (including reading) and in personal adjustment. Together with his/her Block pair, the teacher would be in a position to give immediate help.
7. Identify reading as a general skill upon which both teachers in the Block Plan could work.
8. Identify language arts skills as the responsibility of *all* Block teachers.
9. Encourage teachers to attend to the concerns of the two or three very slow students in their classes.
10. Adapt the curriculum to the students' needs and interests.
11. Place greater emphasis on the overlap between subject areas which in turn will result in stressing the application of learning.
12. Use the above-mentioned overlap and application emphasis and flexible scheduling to further contact with the community by means of field trips.

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[3] The Differentiated Support Option is a course offered two periods per week to low achievement students in mathematics and/or language arts who will be encouraged to take it. Each option will be taught by two of the eight teachers in grade seven and will serve as a support to the regular core courses.

13. Encourage teachers to get to know their students quickly.
14. Encourage teachers to consult their Block pair in counseling a student.
15. Encourage teachers to make home contacts early in the year especially where a student is encountering difficulty.

The actual instructional treatment that occurred under the Block Plan was not documented specifically. Teachers were asked to teach one interdisciplinary unit of three weeks duration, to use the D.S.O. according to the agreed-upon guidelines and to follow the suggestions and directions developed in workshops. The *Manual*[4] itemizes several instructional procedures used. The evidence given by teachers in their interviews [5] also suggest only minor innovations in instructional procedures. We can only surmise that the teachers' instruction changed because of knowing the students better, having flexibility in scheduling, and the teacher teaching two subjects to the same students. In any event, no evidence suggests that major instructional changes occurred. Even the interdisciplinary units only represent two three-week units for any particular class.

MONITORING

Monitoring of the program occurred in two distinct modes: product and process. The first included answering the first seven questions as delineated in the "Purpose of the Study", concerning attendance, attitude, and achievement. The data for this aspect was handled as outlined under "Product Monitoring-Statistical Design". The second mode addressed itself to the eighth question concerning the teacher's perceptions of the program. The design for this monitoring is specified under "Process Monitoring".

Product Monitoring-Statistical Design

The key to the statistical design was the use of the previous grade seven class in the same school and their teachers as the control group. Although there are problems in doing this, the selection of a comparable grade seven class in another community was deemed even more problematic.

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[4] *Grade Seven Block Plan Instructional Manual.*
[5] Greater detail on this dimension is given in teacher interviews reported in the *Report on Process Monitoring*, p. 38.

Control group. The control group consisted of approximately 228 students divided into 8 classes of 28 or 29 students. The academic core subjects were taught in a departmentalized structure with each class being taught the four subjects of the academic core by four different teachers. Teachers, on average, received three preparatory periods per week depending on their role as department head, language arts teacher and so forth. Eight teachers were designated as homeroom teachers for these classes.

Treatment Group. This group consisted of 209 students divided into 8 classes of 26 or 27 students. It followed the principles and structure of the Block Plan. In addition to the average of three preparatory periods each teacher received another three non-classroom periods: one for planning with their Block pair, one for counseling students and one for data gathering in connection with the study. The teachers had all taught grade seven in the school previously and had volunteered for this particular program. Not all volunteers could be accepted because of the necessity of matching subject areas. The following pairs of subject areas resulted.

2 pairs: language arts-social -- mathematics-science

1 pair: language arts-science -- mathematics-social studies

1 pair: language arts-mathematics -- social studies-science

Other school factors. The instructional program for the control and treatment groups differed only in the four academic core subjects plus the one period per week guidance. Both groups began the day with 20 minutes of sustained silent reading. Both had a choice of three options. Both took physical education three times per week. General school rules and regulations remained the same over both years. The treatment group had no reason to believe they were being given any special treatment. Meetings with parents explained the D.S.O. as a minor departure from previous practice. The school had no large classrooms available for 55 students. In fact, the physical changes for teachers and students were very minor.

Variables monitored

The belief upon which this study rests is that the process of schooling is such that a change in any aspect could well affect many different parts of the process. For this reason a total of 14 different variables were monitored: 11 student variables, 1 parent variable, 2 teacher variables. In each case (except for one of the teacher variables), the comparison group was the control group (the previous year's grade seven students, parents and teachers). The variables are

grouped under five headings: student administrative variables, student attitude variables, student achievement variables, parent attitude variables and teacher variables. All tests used to measure these variables are documented in the Appendix.

Analysis. The control and treatment groups were compared using an analysis of variance or covariance. Where appropriate the covariate used was either the verbal or quantitative scores from the Canadian Cognitive Abilities Test. This test is administered to all grade six students in the Edmonton Public School System. Besides the total groups, the high-average groups, the low groups and the "problem learners" groups were compared. The blocking variables used to form these sub-categories were the mathematics score from the Edmonton Public Schools Elementary Mathematics Survey and the reading comprehension score from the Edmonton Public Schools Elementary Reading Test. These tests are also administered to all grade six students in the system. The three sub-categories were defined to be:

1. High-Average: mathematics and reading scores above the 30 percentile
2. Low: mathematics or reading score below the 30 percentile
3. Slow Learners: mathematics or reading score below the 20 percentile

The first two groups were of greatest interest to the study. The third group was formed because it would consist largely of students who were in differentiated programs in the two years. Selecting students who were actually in the differentiated programs was deemed to be inappropriate for several reasons.

Whenever tests show statistically significant differences, the level of .01 or .05 will be identified.

I. Student Administrative Variables

1. Attendance - number of days each student was present in school.

   Instrument - year end report submitted by the school.

   Administration - all students in the grade.

   Analysis - analysis of variance on total, high-average and low groups.

2. Exclusions - number of times individual students were excluded from class. This was a method of discipline used in both the control and treatment years.

   Instrument - teacher report form provided by the school indicating the name of the

student and reason for the exclusion.

Administration – all students in the grade

Analysis – analysis of variance on the number of exclusions for total, high–average and low groups. An analysis of the pattern of exclusions in the two years was also made.

II. Student Attitude Variables

3. Student attitude to their school, their class, their classmates, their teachers and themselves.

Instrument – Barker–Lunn Attitude Scales (3), (4) developed for the National Foundation for Education Research, England in 1966. The scales were recently revised and used in Alberta schools in grade six (12), (16), (20). They consist of 64 questions assigned to 10 factors:

1) Attitude to school
2) Interest in school work
3) Importance of doing well
4) Attitude to class (your own attitude to your class)
5) "Other" image of class (how others feel about your class)
6) Conforming versus non–conforming pupil. "Its nice to fool around in class". A positive response to this represents a non–conforming student.
7) Relationship with teacher
8) Anxiety (non–anxious versus anxious) in class
9) Social adjustment. "I have no one to play with after school."
10) Academic self–image

Administration – randomly selected 50 percent sample administered by non–school personnel.

Analysis – multivariate analysis of variance plus analysis of variance on the four groups of scales indicated below for the total, high–average and low groups. The four groups of scales analyzed on their total scores were:

1. All ten scales representing the total attitudes of the student
2. The first seven scales representing the students' attitude to school, students, classes and teachers
3. The first three scales representing their attitude to school and school work as being significant and enjoyable
4. The last three scales representing the student's self-image in a school context. For those cases where the multivariate analysis showed statistical differences, tests were run on each of the significant scales.

4. Student Attitude to their class.

Instrument - *My Class Inventory* developed by Gary Anderson and Herbert J. Walberg from a larger instrument *The Learning Environment Inventory* (1) (2). *My Class* consists of 45 items assigned to five scales. The instrument was recently revised and used in Alberta in Grade Six (12) (16) (20). The five scales are:

1. Satisfaction
2. Friction
3. Competitiveness
4. Difficulty
5. Cohesiveness

Administration - randomly selected 50 percent sample administered by non-school personnel.

Analysis - multivariate analysis of variance plus analysis of variance on the three groups of scales indicated below for the total, high-average, and low groups. The three groups of scales analyzed on their total scores were:

1. satisfaction and cohesiveness
2. friction and competitiveness
3. friction, competitiveness, and difficulty

For those cases where the multivariate analysis shows statistically significant differences, tests were run on each of the scales.

5. School subject attitude - students' attitude to mathematics and language arts.

Instruments - School Subject Attitude Scales. The scales are a semantic differential

type with items grouped into three subscales:

evaluation – showing a like or dislike

usefulness – whether students think the subject under consideration is useful, and

difficulty – if they think learning is difficult.

The test is administered by having the students write the name of the subject, in this case either mathematics or language arts, at the top of the page and then responding to the pairs of the semantic differential.

Administration – randomly selected 50 percent sample for each subject area administered by project personnel. Students responded anonymously.

Analysis – An analysis of variance, t-test, was applied to each of the three subscales for significance. No grouping of the subscales was deemed appropriate even though a positive outcome on each dimension is clearly identifiable: like, useful and not difficult.

6. Student opinion on school matters.

Instrument – Edmonton Public Schools Student Opinion Survey. The instrument consisted of 31 items allowing student responses of satisfied, dissatisfied or not sure.

Administration – Annually the school board samples twenty percent of the students in every junior high school. The results of this survey for the grade seven class was made available for the two years of the study.

Analysis – An analysis was run individually on 25 items (the other six were deemed irrelevant). The test of significance was the "difference between two independent proportions" (13). The proportions of satisfied responses was compared between the control and the treatment groups and also the proportion of dissatisfied were compared. No analysis was made on the "not sure" category.

III. Student Achievement Variables

7. Mathematics curriculum achievement

Instrument - The Mathematics Survey Test for grade seven consisted of 75 questions based on the grade seven curriculum. It has a multiple choice format. Teachers are asked to use the score on the test in determining the student's final grade for the year.

Administration - administered annually to all grade seven students by the homeroom teacher. The test and results were made available to this study.

Analysis - an analysis of covariance using the Canadian Cognitive Abilities Test - quantitative score as the covariate comparing the control and treatment groups for four groups of students: total, high-average, low and slow learner groups

8. Mathematics basic skills

Instrument - Mathematics Year-end Computation. The test consisted of 32 computational questions designed to test basic skills of the low students in the grade. The items were developed by the mathematics department head in the school.

Administration - taken by all students in the school and administered by the mathematics teacher.

Analysis - an analysis of covariance using the Canadian Cognitive Abilities Test - quantitative score as the covariate comparing the control to the treatment groups for two categories of students: low and slow-learner. The test was deemed inappropriate for the better students.

9. Language arts curriculum achievement

Instrument - Language Arts Final It consisted of 200 items of which 183 items were used, the remaining 17 were deemed not common to all classes.

Administration - taken by all students in grade seven with the exception of the differentiated students in the control group who were excused from writing certain of the items. None of the differentiated students from the control group were used in this analysis.

Analysis - An analysis of covariance using the Canadian Cognitive Abilities Test - verbal score as covariate comparing the control to the treatment groups for three categories of students: total, high-average and low. There were not enough students in the slow-learner category in the control group to warrant

analysis.

10. Language arts basic skills

Instrument – Language Arts Final. A subscore of 128 items was taken from the Language Arts Final test to arrive at this basic skills score. Included in this basic skills score was:

- Spelling and Vocubulary (40 items)
- Punctuation and Capitilization (23 items)
- Sentences (20 items)
- Grammar (nouns, pronouns, verbs, adjectives, and conjunctions) 45 items
- Total 128 items

Administration – taken by all grade seven students.

Analysis – an analysis of covariance using the Canadian Cognitive Abilities Test – verbal score as the covariate comparing the control to the treatment group for four categories of entrants: total, high–average, low and slow–learner groups.

11. Reading Comprehension

Instrument – Canadian Test of Basic Skills Form 3M, Reading Comprehension, Level 13.

Administration – taken by all grade seven students and administered by the language arts teacher.

Analysis – an analysis of covariance using the Canadian Cognitive Abilities Test – verbal score as the covariate comparing the control to the treatment group for four categories of students: total, high–average, low and slow–learner groups.

IV. Parent Attitude Variables

12. Parent attitude to school.

Instrument – EPS Parent Opinion Survey. The instruments consisted of 29 items with responses of "yes", "no", "undecided", or "insufficient information".

Administration – given to a 20 percent sample of parents each year. The results of the survey was made available to the study for the two years.

Analysis – an analysis of the "difference between two independent proportions" was

used on 19 of the items. The proportion of "yes" and "no" responses was run separately. No analysis was made on the "undecided" or "insufficient information" categories.

V. Teacher Variables

13. Attendance of grade seven homeroom teachers.

Instrument – year end report of teacher days absent was obtained from the school secretary on the 8 relevant teachers each year.

Analysis – no testing for significant differences. A simple comparison of numbers was done.

14. Teacher attitude to six selected concepts.

Instrument – Teacher Attitude Test . A semantic differential test was developed using 12 pairs of adjectives under the three dimensions of evaluation, potency and activity. The 12 pairs of adjectives (4 under each dimension) were selected after consulting Osgood (23). No previous test development was made prior to using the test. The concepts used were:

1. Adolescent
2. Community Resources
3. Differentiated Student
4. Parent
5. Teaching Reading
6. School Suspensions

Administration – taken by all eight teachers before and after the first year of the project.

Analysis – A univariate analysis of variance run separately for each dimension for each concept.

Process Monitoring.

This mode was designed to answer several questions related to question 8 in the Purpose of the Study. We wanted to gain insight into whether the teachers felt good about the program. Was it working? But we also wanted to know how it was working. This last concern was especially important since the implementation design was to allow teachers to implement many of the features of the Block Plan on their own. The first concern, then, was for the *program effectiveness* while the second concern was for *program implementation.*

Explicit matters to be dealt with under *program effectiveness* would be the use made of planning and counseling periods, the efficacy of overlapping subject areas, the desirability of double periods, and in general how they felt about the program. Explicit matters to be dealt with under program implementation would be how they set up planning and counseling sessions, how they initiated subject overlays, what special procedures they used in working with the D.S.O., how their teaching procedures were modified in the Block Plan and in general how they developed and modified their instructional and administrative procedures to make best use of the new program.

Procedure. Our first plan included asking the teachers to keep detailed log books but a review of other attempts at this led us to change our design to a monthly interview with teachers. The interviews were informal, tape-recorded sessions with each of the eight teachers individually plus the counselor and administration (periodically). Each month the interviews were analyzed and new leads were pursued in the following interviews. No classroom visitations were made. Our main thrust was to get an understanding of how the teachers felt about the Block Plan and more importantly to get an in depth understanding of what it means for a teacher to work within the teaching context of the Block Plan.

Although not a significant part of the process monitoring, the data provided through the monitoring could be used to describe more fully the treatment given. It would provide us with information on the "degree of implementation". One interesting question, for example, would be whether each of the four block pairs related equally well to the innovation. We may be facing a situation where, for example, some teachers are more comfortable with the Block Plan than others.

Findings of Product Monitoring

The treatment group and control group assessment was made during June, 1981 and 1980,respectively. The findings will be reported under five headings: student administration variables, student attitude variables, student achievement variables, parent attitude variables and teacher variables. Most tests are reported under three different categories of students: total, high-average and low groups. Some of the achievement tests also include a slow-learner group. All of these groups have been defined earlier.

For each test reported the number of students in the control and treatment groups are reported in parentheses. The numbers vary for every test because any student not having a score for the test was eliminated for that analysis. The sum of the numbers from the sub-groups do not add up to the total of the larger group, in general, because the subscores are formed by scores on the blocking variables. Where these scores were missing, students had to be dropped from the analysis. Numbers are also decreased further by missing scores on tne covariate as all the achievement test analyses were analyses of covariance.

Missing scores due to students being absent were minimal. However in two instances, two class sets of scores, Mathematics Basic Skills and Language Arts Final test were misplaced. Both losses were from the treatment group. Since all classes in the treatment group were heterogeneously grouped, we assume these losses did not bias the treatment group scores.

The blocking variable and the covariate scores were from tests given to all students in grade six in the Edmonton Public School System. Students who moved in from outside the school system had these scores missing. These students were not used in any analysis requiring these scores. Also students who entered the school in either year after the first of January were eliminated.

	Total	After January Cutoff	Covariate or Blocking Variable Missing
Control	228	216	48
Treatment	209	197	24

Table 1 - Numbers of students in study

The 12 students eliminated from each group by the January cutoff date included several students with missing data. The 48 students eliminated from the control group and the 24 students from the treatment group seemed rather large. Because of this all of the analyses of covariance were analyzed a second time using an analysis of variance where all students missing the covariate could be used. The results of the analyses were identical (except for one instance), so only the analysis of covariance results are reported. The one exception is also reported.

STUDENT ADMINISTRATIVE VARIABLES

Attendance

The analysis of variance test on attendance did not meet the homogeniety of variance conditions so the results are suspect. Percentage on attendance yielded:

	Total	Hi-Av.	Low
Control (216)[4]	.942	.961 (103)	.940 (65)
Treatment (194)	.959	.965 (113)	.953 (61)
Significance	.01	N.S.	N.S.

Table 2. Percent of student days present

The differences here are not large but they consistently favour the treatment group. The numbers in the sub-groups do not equal the total because the blocking variable was missing for some students.

Exclusion

The analysis of variance test did not meet the homogeniety of variance conditions so the results are suspect.

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[4]All numbers in parentheses indicate the number of students in the analysis.

	Total	Hi-Av.	Low
Control (216) Treatment (194)	551 278	103 (103) 94 (114)	258 (65) 139 (62)
Significance	.01	N.S.	N.S.
Percent decrease	49.5%	10%	46%

Table 3. Total classroom exclusion

Significant differences show only for the total group. Certainly a decrease in the low group of 46% in classroom exclusions is noteworthy. The table below indicates the change in pattern in classroom exclusions.

Number of exclusions	1 to 5	above 5	none
Percent of students in Control	38	16	46
Reduction by 50%	19	8	73
Percent of students in Treatment	32	6	62

Table 3A. Percent of students receiving different numbers of exclusions

If the pattern for exclusions from class had remained similar over the two years, we would have expected row two and three to be the same. Both represent a reduction by 50% in exclusions. However we see a shift in the pattern in the direction of the number of students in the 1 to 5 exclusions category. So then, proportionately fewer students received more than 5 exclusions. This pattern indicates that teachers used exclusions to a considerable extent in the treatment group but that only 12 students (6%) received more than 5. In the control group, 35 students (16%) received more than five.

STUDENT ATTITUDE VARIABLES

Four instruments are reported here: Barker–Lunn School Attitude Scale, My Class, School Subject Attitude Scales and EPS Student Opinion Survey.

Barker-Lunn School Attitude Scale

A multivariate analysis was done on the ten scales of this instrument for three groups of students: total, high–average and low.

Total group. The ten subscales for the *Barker-Lunn School Attitude Scale* showed means of:

Scale	1	2	3	4	5	6	7	8	9	10
Control (100)	3.3	2.6	7.7	9.7	2.7	2.1	3.0	2.7	2.8	10.7
Treatment (97)	3.8	3.1	8.0	11.2	3.2	2.0	3.5	2.8	3.1	11.5

Table 4. Means of ten scales of *Barker-Lunn School Attitude Scale* – Total group

For all but subscale 6, the treatment group is higher. The multivariate analysis of variance showed the vector of means for the two groups to be significantly different at the .05 level.

Because the vector of means was significantly different for the two groups, individual means were analyzed for significant differences. The univariate analyses of variance for each subscale separately yielded:

Subscale	
1. Attitude to school	.05
2. Interest in schoolwork	.05
3. Importance of doing well in school	N.S.
4. Attitude to class	.05
5. "Other" image of class	.01
6. Conforming versus non-conforming pupil	N.S.
7. Relationship with teacher	N.S. (.07)
8. Anxiety in the classroom situation	N.S.
9. Social adjustment - getting on well with classmates	N.S.
10. Academic self-image	N.S.

Table 5. Subscales of *Barker-Lunn School Attitude Scale* indicating significant differences.

The first two factors show the treatment group with a more positive outlook toward more global school concerns, while subscale four and five show a more positive attitude toward their own class and especially how other students see their class. The "relationship with teacher" factor was significant at the .07 level which is encouraging. Further analysis on the following combination of subscales yielded:

Sum of all ten subscales	.01
Sum of first seven subscales	.01
Sum of first three subscales	.05
Sum of last three subscales	N.S.

Table 6. Four groupings of subscales of the *Barker-Lunn School Attitude Scale*, indicating significant differences.

High-Average Group. The ten subscales for the *Barker-Lunn School Attitude Scale* for this classification showed means of:

	1	2	3	4	5	6	7	8	9	10
Control (56)	3.7	2.9	8.0	9.9	2.7	2.2	3.8	3.2	2.9	12.6
Treatment (55)	3.9	3.3	8.0	11.2	3.3	2.1	3.7	3.1	3.1	12.7

Table 7. Means of ten subscales of the *Barker-Lunn School Attitude Scale* - High-Average Group

For all but subscales 3, 6, 7 and 8, the Treatment group is higher. The multivariate analysis of variance showed the vector of means for the two groups to be not significantly different.

Subsequent analysis was performed on the following combinations of subscales:

Sum of all ten subscales	N.S.
Sum of first seven subscales	N.S.
Sum of first three subscales	N.S.
Sum of last three subscales	N.S.

Table 8. Four groupings of subscales of the *Barker-Lunn School Attitude Scale*, including significant differences – High-Average Group.

None of the combination of subscales showed differences.

Low groups. The ten subscales for the Barker-Lunn School Attitude Scale for this classification showed means of:

	1	2	3	4	5	6	7	8	9	10
Control (29)	2.9	2.3	7.4	9.6	2.6	1.8	1.9	2.0	2.6	8.3
Treatment (33)	3.8	2.7	8.0	11.2	3.0	2.0	3.3	2.6	3.0	9.8

Table 9. Means of ten subscales of the *Barker-Lunn School Attitude Scale* – Low Group.

For every subscale the treatment group is higher. The multivariate analysis of variance show the vector of means for the two groups to be not significantly different.

Subsequent analysis on the following combination of subscales yielded:

Sum of all ten subscales	.01
Sum of first seven subscales	.01
Sum of first three subscales	.05
Sum of last three subscales	.05

Table 10. Four groupings of subscales of the *Barker-Lunn School Attitude Scale*, indicating significant differences – Low Group.

The Barker-Lunn School Attitude Scale for the low group taken as a total school attitude of the student significantly favours the treatment group. The school and school work related scales (first seven) when summed up also show significant differences. Even the general school related subscales and the personal-social dimension showed significant differences. So even though the

multivariate analysis did not show statistical differences, the analysis of the subscale groupings is strong evidence that the low group was positively affected by the treatment.

A further analysis of variance on single subscales for the low group showed subscale 7 (relationship with teacher) to be highly significantly different favouring the treatment group.

Summary. A summary of the findings from the *Barker-Lunn School Attitude Scale* analyses shows:

	Total	Hi-Av.	Low
Vector of means	T**	N.S.	N.S.
Sum of 10 (school attitude)	T**	N.S.	T**
Sum of first 7 (school life)	T**	N.S.	T**
Sum of first 3 (school work)	T*	N.S.	T*
Sum of last 3 (personal-social)	N.S.	N.S.	T*

T* treatment group favoured at the .05 level
T** treatment group favoured at the .01 level.

Table 11. Summary of *Barker-Lunn School Attitude Scale*.

In addition separate subscales of "attitude to school", "interest in school work", "attitude to class" and "other image of class" significantly favoured the treatment group for the total group. One noteworthy subscale favoured the treatment group for the low group – "relationship with teacher."

My Class

My Class consists of five subscales: satisfaction, friction, competitiveness, difficulty and cohesion. A comparison between the control and treatment groups was made for three groups: total, high-average and low. Two different analyses were done: first, a multivariate analysis and then, an analysis of variance on three groupings of subscales.

Total group. The five subscales for *My Class* showed means of:

	1	2	3	4	5
Control (108)	14.1	22.6	21.3	15.9	16.9
Treatment (93)	16.4	20.6	20.7	15.5	18.1

Table 12. Means of five subscales of *My Class* – Total Group.

A glance shows the treatment group felt (1) more satisfaction, (2) less friction (3) less competitiveness, (4) less difficulty and (5) more cohesiveness. The multivariate analysis of variance showed the vector of means for the two groups to be significantly different at the .01 level.

Further analysis of separate subscales yielded:

Satisfaction	.01
Friction	N.S.
Competitiveness	N.S.
Difficulty	N.S.
Cohesiveness	.05

Table 13. Subscales of *My Class*, indicating significant differences – Total Group.

The treatment group as a total group felt greater satisfaction and enjoyment and also felt the class was more of a unit.

Analysis of three groupings of subscales yielded:

Sum of satisfaction and cohesiveness	.01
Sum of friction and competitiveness	.05
Sum of friction, competitiveness, and difficulty	.05

Table 14. Three groupings of subscales of *My Class*, indicating significant differences – Total Group

There is, therefore, strong evidence that students in the treatment group felt better about their class and their classmates.

High-Average group. The five subscales for *My Class* for the group showed means of:

	1	2	3	4	5
Control (45)	13.5	22.6	21.1	15.6	16.9
Treatment (55)	16.3	21.1	21.07	15.3	18.1

Table 15. Means of five subscales of *My Class* – High-Average Group.

Again, in every case the trend is in favour of the treatment group. The multivariate analysis of variance showed that the vector of means was not significantly different.

Analysis of three groupings of subscales yielded:

Sum of satisfaction and cohesiveness	.01
Sum of friction and competitiveness	N.S.
Sum of friction, competitiveness and difficulty	N.S.

Table 16. Three groupings of subscales of *My Class*, indicating significant differences – High–Average Group.

Low group. The five subscales for *My Class* for this group showed means of:

	1	2	3	4	5
Control (33)	15.8	23.3	21.9	15.8	18.0
Treatment (27)	17.4	20.3	21.2	16.4	18.4

Table 17. Means of five subscales of *My Class* – Low Group.

For this group, the low group, only subscale 4 (difficulty) does not favour the treatment group. The multivariate analysis of variance showed the vector of means for the treatment and control group to be significantly different at the .05 level.

Further analyses of variance on single subscales showed:

Satisfaction	N.S.
Friction	.01
Competitiveness	N.S.
Difficulty	N.S.
Cohesion	N.S.

Table 18. Subscales of my class, indicating significant differences – Low Group.

The low group in the treatment group felt less friction within the class than did the control group. Analysis of three groupings of subscales yielded:

Sum of satisfaction and cohesiveness	N.S.
Sum of friction and competitiveness	.05
Sum of friction, competitiveness and difficulty	N.S.

Table 19. Three groupings of subscales of *My Class*, indicating significant differences – Low Group.

The low group in the treatment group felt less friction and competitiveness than did their counterparts in the control group.

Summary

The analysis of *My Class* resulted in the following picture:

	Total	Hi-Av.	Low
Vector of means	T**	N.S.	T*
Satisfaction - cohesiveness	T**	T**	N.S.
Friction - Competitiveness	T*	N.S.	T*
Friction - Competitiveness - Difficulty	T*	N.S.	N.S.
Single scales - Satisfaction	T**		
Cohesiveness	T*		
Friction			T**

T** - .01 level
T* - .05 level

Table 20. Summary of *My Class*

In general a better overall attitude toward their class was indicated by the treatment group for the total group. Students in the high-average category felt greater satisfaction and cohesion while students in the low category felt less friction and competitiveness.

School subject attitude.

The attitude toward two school subjects were tested: Mathematics and Language Arts. The *School Subject Attitude Scales* result in three subscales which are not additive. For each subject area the scales give a rating on evaluation, usefulness and difficulty as perceived by students. Because this instrument was taken anonymously no students were eliminated from the analysis.

Mathematics. The means on each subscale were:

	Evaluation	Usefulness	Difficulty
Control (112)	.28	1.22	.003
Treatment (104)	.52	1.34	.00

Table 21. *School Subject Attitude Scales* - Mathematics

Simple t-tests applied to these means showed none of them to be significantly different. The trend however is in the direction of the treatment group.

Language Arts. The means on each subscale were:

	Evaluation	Usefulness	Difficulty
Control (115)	-.11	.842	-.22
Treatment (99)	-.02	.726	-.08

Table 22. *School Subject Attitude Scales* – Language Arts

Simple t-tests applied to these means showed none of them to be significantly different. Here however, not all three favour the treatment group. There are no significant differences in attitude toward Language Arts. The control and treatment groups felt the same about both mathematics and language arts as subjects.

EPS student opinion survey

The results were analyzed in two ways. First a comparison between groups on the proportion of "satisfied" responses and secondly a comparison on the proportion of "dissatisfied" responses. The actual proportion of respondents for the two groups is given below. The key word in the item is indicated.[1] Obviously irrelevant items are not reported. A test of the "difference between two independent proportions was used."

Item		C(42) satisfied	T(40) satisfied	C(42) dissatisfied	T(40) dissatisfied
1.	options available	.64	.93*	.33	.03*
2.	usefulness of courses	.57	.75	.14	.10
3.	basic skills	.74	.63	.05	.13
4.	homework	.62	.63	.33	.23
5.	learning	.69	.75	.19	.05
6.	mark determination	.59	.48	.35	.28
7.	reporting to parents	.64	.53	.26	.23
8.	principal	.64	.85*	.29	.03*
9.	assistant principal	.64	.75	.31	.05*
11.	teachers	.52	.60	.31	.13*
12.	counselor	.88	.75	.05	.25*
13.	planning assistance	.4	.25	.12	.18
14.	say in decisions	.36	.35	.33	.23
15.	discipline	.43	.50	.43	.33
16.	behaviour of others	.36	.45	.57	.30*
17.	behaviour out of class	.45	.40	.48	.43
18.	school rules	.64	.55	.21	.23

[1]A copy of the survey appears in the Appendix

19.	how others treat you	.64	.75	.33	.13*
21.	getting classes you like	.57	.73	.31	.18
22.	lunch arrangements	.52	.75*	.33	.15
23.	extra curricular	.76	.80	.14	.10
27.	teacher interest in you	.5	.57	.33	.18
28.	chances of succeeding	.64	.80	.24	.10
29.	numbers of pupils per class	.76	.82	.17	.10
30.	length of class period	.64	.73	.31	.25
31.	school in general	.57	.80*	.19	.05*

* indicates significant difference at the .05 level.

Table 23. Proportion of "satisfied" and "dissatisfied" responses on *EPS Student Opinion Survey*

Of the 25 items reported in the "satisfied" column 8 favour the control (none are significant) while 17 favour the treatment group (3 of them, significant). Of the 25 items reported in the "dissatisfied" column, 4 favour the control (one is significant) while 21 favour the treatment group (7 are significant). Two items are significantly different in both columns:

8. Satisfaction with the principal
31. Satisfaction with the school in general.

The other item showing significance in the "satisfied" column is:

22. lunch arrangements

Five other items showing significance in the "dissatisfied" column, indicate that the treatment group contains fewer students that are dissatisfied with:

1. number of options open
9. their assistant principal
11. their teachers
16. the behaviour of others in class
17. how others treat them.

The one remaining item showing significant differences is in favour of the control. The control group had fewer students dissatisfied with the counselor. This may be because the counselor saw much less of the grade sevens during the treatment year.

One further point, the items which tended to favour the control group in both the satisfied and dissatisfied columns (none of them significantly) were 3 dealing with counselor-related activities and one concerning basic skills.

The student opinion survey indicates improved relationships between students and their principal, assistant principal, their teachers, and other students (both in other student behaviour and how other students treat them.)

STUDENT ACHIEVEMENT VARIABLES

The five achievement variables were measured by four different tests:

1. Mathematics Curriculum Achievement - *Math Survey Test*
2. Mathematics Basic Skills - *Mathematics Year-end Computation Test*
3. Language Arts Curriculum Achievement - *Language Arts Final*
4. Language Arts Basic Skills - *Language Arts Final - Sub-score*
5. Reading Comprehension - *Canadian Test of Basic Skills*

These tests were analysed for four groups: total, high-average, low and slow learners. The Computation Test was analyzed only for the low group and the slow learners. All of the analyses were analyses of covariance with either Canadian Cognitive Abilities Test verbal or quantitative score being used as the covariate. An analysis of variance was run also as a check. The results of the two analyses were very similar so only the analysis of covariance will be reported. The number of students in each analysis varies due to missing test scores.

Total groups. For the total group the means on the Canadian Cognitive Abilities Test were:

	Verbal	Quantitative
Control (165)	104.3 (167)	102.9 (165)
Treatment (171)	104.9 (168)	102.0 (171)

Table 24. A comparison of the Control and Treatment Groups on *Canadian Cognitive Abilities Test*(covariate) - Total Group

The groups then can be seen to be quite similar according to the covariate. The means for the four tests were:

	Math Survey	L.A. Total	L.A. Sub-score	Reading
Control	46.5 (165)	112.9[1] (158)	81.2 (169)	44.8 (167)
Treatment	45.8 (171)	109.3 (131)	82.1 (131)	47.1 (168)
Significance (covariance)	N.S.	N.S.	N.S.	.05

Table 25. Unadjusted means on achievement tests, indicating significant differences on analysis of covariance - Total Group.

The reading score showed significant differences in favour of the treatment group.

High-average group. For the high-average group the means on the Canadian Cognitive Abilities test were:

	Verbal	Quantitative
Control	110.6 (98)	109.3 (97)
Treatment	109.6 (111)	107.1 (112)

Table 26. A comparison of the control and treatment groups on the Canadian Cognitive Abilities Test (covariate) - High-Average Group.

The verbal scores are close while the difference in the quantitative score of 2.2 points was not significant under an analysis of variance. The analysis of covariance showed means on four tests as:

	Math Survey	L.A.total	L.A. Sub-score	Reading
Control	54.4 (97)	124.6 (98)	89.9 (98)	51.2 (98)
Treatment	51.1 (112)	117.5 (84)	87.3 (84)	51.2 (111)
Significance	N.S.	.01	N.S.	N.S.

Table 27. Unadjusted means on achievement tests, indicating significant differences on analysis of covariance - High-Average Group.

The only significant difference was in the language arts total score, favouring the control group.

An analysis of variance run separately on the math scores shows means of 54.7 (control) and 51.1 (treatment). This is statistically significant at the .05 level. However, the control group was initially 2.2 units above the treatment group.

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[1] This score is slightly raised because approximately 15 differentiated students in the control group were excused from writing the total test.

Low group. For the low group, the means on the Canadian Cognitive Abilities test were:

	Verbal	Quantitative
Control	93.7 (56)	92.7 (57)
Treatment	95.9 (55)	92.6 (57)

Table 28. A comparison of the control and treatment groups on the Canadian Cognitive Abilities Test (covariate) – Low Groups.

Both groups were very similar on quantitative score but the treatment group was 2.2 points higher on the verbal score.

The analysis of covariance showed means on five tests to be:

	Math Survey	Comp.	L.A.total	L.A. Sub-score	Reading
Control	33.8 (57)	23.2 (48)	89.4 (47)	66.5 (58)	33.3 (56)
Treatment	36.2 (57)	25.6 (37)	94.8 (45)	72.8 (45)	39.5 (55)
Significance	N.S.	.05	.05	.01	.01

Table 29. Unadjusted means on achievement tests, indicating significant difference on analysis of covariance – Low Group.

All five tests favour the treatment group for this level and four of them are significantly different. The treatment definitely favours the low group with respect to achievement.

Slow-learner group. For the slow-learner group, the means on the Canadian Cognitive Abilities test were:

	Verbal	Quantitative
Control	90.8 (40)	89.2 (41)
Treatment	93.6 (35)	89.4 (37)

Table 30. A comparison of the control and treatment groups on the *Canadian Cognitive Abilities Test* (covariate) – Slow Learner Group.

Although the verbal score for the treatment group is higher, an analyses of variance on these scores shows no significant differences. The analysis of covariance showed means on four tests to be:

	Math Survey	Comp.	L.A. Sub-score	Reading
Control	30.7 (41)	22.3 (35)	64.0 (42)	31.3 (40)
Treatment	35.6 (37)	24.5 (22)	72.5 (31)	38.5 (35)
Significance	.05	N.S.	.01	.01

Table 31. Unadjusted means on achievement tests, indicating significant differences on analysis of covariance – Slow Learner Group

All four tests favour the treatment group, only the computation test not showing a significant difference in means. For both the low group and the slow-learner group, the mathematics differences are just at the .05 level but the language arts and reading are at the .01 level.

PARENT ATTITUDE VARIABLE

EPS parent opinion survey.

The results of this survey were analyzed in two ways. First the proportion of "yes" responses were compared between the control and treatment groups. Secondly, the "no" responses were compared. For a larger number of items the "no" responses were very small and could not be meaningfully analyzed. These are noted. The proportion of yes and no responses were as follows:

		C(37) "Yes"	T(33)	C(37) "No"	T(33)
1a	(i) Reading/Writing/Speaking	.92	.76	.03	.06
1a	(ii) Grammar/Spelling	.76	.73	.14	.12
1b	Mathematics	.89	.85	.05	.00
1c	Science	.86	.79	.08	.00
1d	Social Studies	.89	.73	.08	.03
2.	Discipline	.81	.55	.19	.27
3.	Child likes school	.72	.85	.16	.09
4.	Use of money	.54	.66	.11	.06
5a.	Child's teacher	.73	.79	.11	.12
5b.	School principal	.89	.76	.05	.03
6.	Feel welcome at school	.86	.85	.00	.03
7.	Voice in decisions	.57	.67	.16	.12
8.	Informed about your child	.73	.91*	.22	.06
9.	Guidance and counseling	.70	.79	.08	.09
10.	Extracurricular	.70	.85	.08	.00
11.	Attendance handling	.89	.91	.11	.06
13.	Class size	.46	.70*	.41	.06*
14.	Child's school	.86	.82	.08	.03
15.	Planning for high school	.46	.48	.16	.03

* indicates significant difference at the .05 level

Table 32. Proportion of "yes" and "no" responses on the *EPS Parent Opinion Survey*

In the "yes" column, the five questions dealing with the four core academic subjects, language arts, mathematics, science and social studies show in favour of the control group. None of these are significant but it does show parents probably felt uneasy about the changes. Of the remaining 14 items, 11 favour the treatment group. Two of these are significant:

8. informed about your child
13. class size

In the "no" column, the proportions are so small that no interpretation is relevant. Item 13 (class size) shows up as favouring the treatment group.

The Parent Opinion Survey, then, tends to support the treatment except for the non-significant trends in the consistently less positive reaction to the academic core subjects.

TEACHER VARIABLES

Teacher attitude and attendance. Two numerical measures were made in this category. The attendance patterns of teachers in the control year and the treatment year were looked at. The analysis made is simply an average of days missed per term and for the year. As one teacher in the control group was absent an extraordinary amount of time, the average was found excluding this teacher. Also, one teacher in the treatment group missed 30 days because of an accident. This was not included in the number of days.

	Sept-Dec	Jan-June	Year
Control (7)	4 days	5 days	9
Treatment (8)	1.75 days	3.6 days	5.35

Table 33. Average of days missed per teacher in the control and treatment groups.

Only three of the teachers are the same in the two groups so such an analysis is rather suspect.

The results for what they are worth do favour the treatment.

Teacher attitude. The semantic differential approach dealt with six concepts: adolescents, community resources, differentiated students, parents, teaching reading, and school suspensions. Each concept received a rating for evaluation, potency (significance) and activity (amount of energy). The means for each of these three dimensions for each concept is given and a multivariate analysis level of significance is indicated. The neutral score for these means is 12.

		Eval.	Potency	Activity
Adolescent	Before	15.9	12.6	14.5
	After	18.8	11.5	16.4
Community Resources	Before	14.6	12.3	11.9
	After	15.0	12.6	12.4
Differentiated Student	Before	13.3	11.5	9.9
	After	14.8	10.1	10.5
Parent	Before	15.3	13.0	13.4
	After	14.8	10.9	11.9
Teaching Reading	Before	14.3	12.1	12.8
	After	14.9	12.1	12.0
School Suspensions	Before	11.0	16.5*	12.4
	After	12.3	14.3	12.7

Table 34. Ratings on three dimensions for six concepts on the *Teacher Test of Attitude*

The only significant difference is in the potency of school suspensions. This represented a decrease in potency. Otherwise one can note a trend for every concept to be viewed more positively and a trend for the potency (significance) of most concepts to be diminished. None of the concepts (except community resources) gained in potency (significance). Community resources is the only concept which gained in all three: evaluation, potency and activity. Parent is the only concept which decreases in all three: evaluation, potency and activity.

It is problematic to speculate on any of these figures since only one shows statistical significance. Also some of the data suggests that some teachers did not take the task (semantic differential) seriously.

Report of the Process Monitoring

One of the main intents of the Block Plan was to find a solution to the fact that..

> "the grade sevens felt so uncomfortable in suddenly being exposed to eight, nine teachers...and it took them to January to sorta fit in and get themselves organized..." [Oct.][9]

This quotation gives one teacher's perception of the Block Plan. The interviewer, a researcher not previously associated with the project, set out to gain an insight into how the project was viewed by the teachers. His discussions with the teachers, counselors and administrators over an eight month period disclosed information about how the teachers felt about several aspects of the Block Plan and how they saw themselves adapting to its shortcomings and benefits.

IMPLEMENTATION

Implementation was perceived to be something that came "down" from Central Office, particularly as it pertained to the Block Plan. Some teachers viewed the project as simply something Central Office wanted to try. Not all teachers involved in the project understood what they were expected to do. In fact some comments early in the year seemed to centre around the notion that there was so much "freedom" and flexibility in terms of expectations that at least one teacher was worried because "...no one is telling me what to do." [Oct.]

More concern about implementation was voiced late in the year during the discussions about the feasibility of implementing the Block Plan in grade eight. Implementation seemed to have become very political at the school level. Many forces, e.g., self-interest groups, elite groups, "fears", bitterness and jealousy, contributed to the project teachers' definition of implementation. This is in stark contrast to the implementation of the project at the beginning of the year.

The numerous forces entering into the decision to implement in grade eight (which, by the way, was rejected) probably reflects some tension which may have developed between project and nonproject teachers but also reflects teachers' resistance to some fundamental changes that would have to be made. The earlier view of the "top down" implementation is somewhat difficult to interpret in the light of the perceived "freedom". At any rate, the process of school

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[9]The interviews were made in October, November, February, March and April of the year of implementing the Block Plan.

implementation was not perceived by teachers as being straightforward and deserves considerably more attention than it was given in the project.

A MAJOR PROBLEM

Almost from the start, some project teachers resented having had little choice in deciding with whom they would be 'working' throughout the duration of the project. Project teachers realized at the outset that they would be spending a good deal of their time with their respective partners and thus felt bitter that they had little input into the choice of with whom they would share this experience. After all the project teachers would be conferring closely with their partner, spending sometimes "entire morning(s) in a joint session". [Nov.] Thus an affinity to one's partner in this type of project was deemed crucial. As one teacher pointed out

> "someone else has thought up the program, someone else has created it, the goals...the philosophy...(at the very least) we should have had the opportunity to pick our own partners..." [Oct.]

So the feeling of being forced into 'square holes' [round pegs into square holes] was evident very early in the year. Coupled with this feeling of "powerlessness", as one teacher put it, another dimension of cooperation, or lack of it, began to surface among the teachers. "Sharing" with one's Block pair meant personal disclosure of the *way* we teach. Some project teachers felt naked to the "feared" criticism of their partner. The nature of sharing or "cooperation" now took on a different light.

> "There is a feeling that you are trying to interfere with what I am doing in my classroom. Like I am going to have to expose my [teaching] techniques and my marking and evaluation and performance to your eyes and I'd rather close my door. And this attitude has been present." [Nov.]

Some of the difficulties with the project itself might have been prevented. One teacher states succinctly

> "...I think that to a greater degree we have to see a pairing based upon 'I want to work with so and so', rather than just an assignment of a person ..."

Many teachers also felt that teachers must be paired with other teachers who share the same philosophy of classroom management.

> "Well we have to get our act together...planning on how you are going to handle the class. I had a talk with him before the program began and there were substantial differences on that...and frankly, I didn't like the way he handled his classes and he didn't want to budge on the issue, which upset me...also there has been a change in that...So if we are going to have teachers working together, they should have similar expectations behavior-wise, a similar way of getting assignments from kids that are

late..." [Feb.]

However, as time passed, project teachers settled into the fact that their respective partners, whether perceived negatively or not, had to be kept. Although they didn't have an initial choice in this matter, they soon realized that if they looked beyond the pairings, to the students, that there was merit in working together. One teacher's negative experience with his partner at the outset of the project changed. He states:

> "...I was upset about it because I was initiating everything. There has been a change, we have gone on an inservice together, my partner and I. We've talked quite a bit about the program, we have been doing things together...and he seems to be a 'good sport'...we are now sharing the load..." [Mar.]

They were finally beginning to 'talk' and work together, instead of against each other.

Many project teachers felt that working together in terms of joint planning was not a necessary goal of the project when "using conventional teaching approaches." [Feb.] Some teachers felt that being able to sit down with one's partner and talk about an individual student and group of students was a big asset.

Some of the project teachers did not become involved in this alternative program ready and willing to approach teaching any differently than they had in previous years. They viewed the project in terms of a structural change (change in timetable, blocking, etc.) and not in terms of changing how they might see "teaching" or the student differently – pedagogically. Most of the project teachers didn't view this year as a way to see their colleagues and students in a different light. Granted, a selected few did go beyond conventional practices and modes of thinking in terms of teaching. One teacher who has experienced what it is like to 'look' beyond conventional teaching practices tells what it meant for him to get together in a joint sit-down session with his partner and ultimately talk about what teaching is all about.

> I feel like I have a colleague. I feel like someone else cares about what I am doing and I care about what he's doing...and I think that the ability to sit down with one's colleague and come to a reasonable course of action in and of itself is a very gratifying and valuable experience. And I think that this [project] tends to encourage it...And it isn't a student who simply has to accept the decision. This is a colleague who can give you 27 rational arguments why your decision might not be exactly where we want to go..." [Mar.]

The matter of sharing, cooperating and working with one's Block pair would certainly rank as a major problem for implementation. Having a choice of teaching partner would not be a guarantee for success. It would appear that teachers have the idea that teaching is an act completed in "isolation" and that they can't really learn anything from one's neighbouring

pedagogue. Under the Block Plan teachers are not learning "in general" from their colleagues, they have a specific group of students to help through a specific curriculum.

The question does remain as to whether working together is an essential ingredient in the Block Plan.

> "It is not essential but it sure enhances it. I think it is an objective to be strived for. The kids would probably feel that the program is more for them then. There are certain things that I think are essential to the way that I would like to see them planned, that the two of us sit, down and do them in a sequential basis. Essential? 'No' A definite objective? 'Yes'" [Mar.]

The obstacle to developing good working relationships could be that teachers are too busy to really do joint planning. But the truth may be, as one teacher explains "we must as teachers be particularly sensitive to 'our' sensitive nature. [The bottom line] is that we must show that we care." [Mar.]

SOME CONCERNS

Just as many project teachers viewed the blocking of time favourably, so too several project teachers disagreed.

> "What happens now is, in a lot of kids' cases, if they don't like one teacher half their day is ruined...I heard that over and over again." [Apr.]

> "Well I think getting to know the kids better... is a misconception...because at this time of year [April] I know the kids just as well as I knew my kids last year. The only thing was that I knew them better sooner [this year]."

So it would appear the "block of time" has its trade-offs.

Some concern was expressed over only five language arts periods compared to the previous six per week. One teacher stated he was not covering the

> "material that I think should be covered in the time period...We are taking longer to get through certain units and to develop certain skills." [Nov.]

At the same time this teacher said

> "I am finding that I am changing my teaching style, planning, and what I do with the kids."

Clearly mixed ability classes, field trips and interdisciplinary unit can work to change a teacher's style. Perhaps this teacher should not have been trying to cover the same "material" as he had other years. Perhaps the project erred in not trying to specify "new goals" more clearly. Two comments serve to confirm this latter hypothesis:

> "With the program I expected more precise guidelines" and
>
> "What do they expect...I am not sure of what they want because it has never been really communicated to us effectively." [Nov.]

A general concern of "isolation" from the rest of the school existed. These teachers were "grade seven" teachers. One teacher claimed that for the first time in 15 years of teaching the graduation exercises were of no interest to her. She knew no grade nine students and could not get excited about graduation. The isolation extended beyond students to other teachers:

> "We kind of sit in our own groups in the staffroom. We have preps together and so we don't share a prep with anyone else. Like in other years you get to know other teachers just by sitting in the staffroom." [Apr.]

SEVEN THEMES

The block schedule

All project teachers felt that the flexibility of the timetable and its contribution to the whole program was everything. Certainly, intimately involved in the flexibility of the program is the sense of freedom that one experiences from the regimented schedule of private classes. The project teachers felt that field trips were more easily arranged. Further a more natural continuity from one subject discussion to the next was possible. For another project teachers not having "to end the period ten minutes early to collect the books, count the books, make sure they are piled..." [Mar.], was enough to convince her of the benefits of the flexibility of the instructional time. Finally another teacher stated that the two periods back to back among the pair of teachers allowed his guest speaker plenty of time to address the students.

> "We don't have to disturb anyone else. Also I have had on occasion to ask Mr. X to keep his class for a little while longer while mine writes a test – in the end you get a better product..." [Mar.]

From the outset, the project teachers felt wholeheartedly that the "blocking of time" was a good thing. The majority felt that the greater time spent with the students helped in getting to know them as individuals. "Being a lot more close and personal with them" [Feb.] was perceived to be important.

> "That is, spending more time basically on their specific individual needs, as human beings first and students second." [Feb.]

Similarly, one teacher likened the block timetable to that of teaching in the elementary grades: "its like having two classes with the same class." The blocking of time gave the teacher the opportunity

> "To integrate the skills of L.A. and carry them over into (other subjects)...The kids realize that L.A. extends across the curriculum more effectively than if I just have a language arts for four different grade seven classes. Better writing skills was the big plus from all this."

The block of time provided flexibility but it encouraged overlapping of subjects. Often this overlap came through the media of the field trip.

> "I have one boy who has chosen as a social studies project to study the effects of the environment on a portion of Alberta on the animal life in the region which has brought the science field trip right into social studies." [Feb.]

Teacher as counselor.

In terms of a more clearly defined counseling role, the teachers found that although as set forth in the project a period was set aside for counseling, none of the teachers used this period strictly for counseling. The majority of the teachers used this period to complete unfinished classroom work, phone parents, attend to personal duties or just plain talk to students. All were in agreement that counseling the student occurred at all hours of the day; before, during, and after school, teachers were said to engage in what one might call counseling.

Project teachers stated fairly consistently that "the blocking of the time has encouraged greater contact with the kids."

> "I am more aware of (them)...in more than one area. I am far more aware of him in math, far more aware of him in language arts...Aware of how he is doing. Aware of what kind of skills he's got in those other areas than I would normally be..." [Feb.]

Consequently, some project teachers "[have] never been closer to a group of grade seven kids before..." [Nov.] At least one teacher admitted

> "I like them [the students], I really like them this year and because of that I have started an [extracurricular] club." [Oct.]

All this has led to a greater teacher understanding of how to counsel individual students.

> "And this is important – because you have to know the kids before you can counsel them. And I think that getting to know them is so important. It just has to take place anytime, not just during that designated period for counseling...I do much better in a situation where I can 'chat' with the kids..." [Oct.]

Certainly the goal of providing a more clearly defined counseling role for the teachers in terms of a designated period designed especially for student counseling has not been all too successful. However the success lies in first, teacher awareness of the necessity of getting to 'know' the student before counseling can become to any degree effective and secondly, the students, according to the project teachers, have responded so well to a more open and concerned teacher. One school counselor stated

> "The students seem to be very much aware of what is happening around the school...as well...the student seems to have fewer difficulties compared to some of the other grades." [Nov.]

Certainly in this light then, the counseling dimension of the project can be said to have gone far beyond the immediate expectations of some project organizers.

There's an additional off-shoot here as well. It stands to reason that if student and teacher are together more often [at least in one's company] and this facilitates a greater 'awareness' of the student on the part of the teacher, then the opposite is true as well. The students realize maybe more than ever before that the teacher is human too; they begin to see us in a 'human way'." [Oct.] And that's not bad. Pedagogically speaking, learning and growth don't take place in a vacuum with teacher being a mere dispenser of 'facts' and devoid of compassion.

> "So [the students] have done a little growing up inside...they have to be more responsible in what they are doing, they have to be a little more mature..." [Nov.]

Some counseling can be seen as preventative. The Block pair of teachers were often able to identify trouble spots early and work on them before they got "out of hand." A quick consultation with your colleague could identify a concern that if left unchecked would require hours of straightening out. If counseling can be looked at in terms of reduced discipline problems that occur in the classroom as well as in the school in general then the high degree of contact the teacher has with the student has helped. According to one counselor's comments parents too have openly expressed praise for the way in which their children have adjusted to grade seven this year.

> "[The parents]...have indicated to me that they are very pleased with the program...I've had nothing but good comments from parents..." [Nov.]

Teacher cooperation.

Some teachers involved in the alternative program did find the experience of working with another teacher, sharing a group of students for a year, quite rewarding. The degree of cooperation, the extent of joint-planning that actually went on among the various grade seven

pairs varies. Each teacher interpreted the goals of the project differently. Each brought with them expectations different fundamentally from the next person. In the final analysis, however, actual goals realized far exceeded initial goals, at least in some areas.

In terms of cooperation, one teacher comments:

> "I've never had a chance to cooperate...get two teachers in two different subject areas to cooperate on a common goal – even though each has a slightly different variation on that goal,...and I think that we find that some vistas open up that have never existed before..." [Feb.]

A new sense of discovery began to take shape as the teachers began to get to "know" their respective partners. For some of the pairings, this new sense never manifested itself for one reason or another. When asked how the joint planning was working out, the answers were varied, from "it's working quite well," to, "it isn't," to, "I didn't know that I was supposed to be" [Mar.] So it was an individual thing.

When the teachers were asked if they thought joint planning with their respective partners was considered essential to the philosophy of the program, all were in agreement that on a day-to-day type of planning basis, 'no' it was not essential. [Mar.] Joint planning was essential only when a specific idea or project was deemed useful to both concerned, e.g., field trips, individual student problems, discipline, etc., or where a cooperative action was deemed necessary. One teacher expressed it this way:

> "I think in terms of target opportunity type of planning – someone gets an idea 'hey, I am going to be doing such and such in a little while, now do you think that' – you just bring up your proposal – that type of planning is essential to those cross-overs occurring at just enough points that then is this feeling that it is a joint effort on the part of the teachers to maybe see someone else's view..."

further,

> "I think that [joint] planning is essential [when] you plan out a specific project in that part of the [joint] planning is strategy for dealing with situations that develop in the classroom with a particular gang or individuals in the class...[For example, if my partner has a discipline problem in class] he'll say [to me] 'could you talk with so and so and tell him that he is really pushing it', 'here's what he did', gives a number of observations and then tells me what he personally feels after he has given me the observations. This allows me to have a little talk with my student in my room and say 'hey, it's getting heavy, don't you think, what do you think..."

This teachers' comments compare closely with how others interpreted this joint planning notion. At least one teacher felt the joint planning demanded too much from the teacher. He states "teachers like to get into their own little entity and resent intrusions from other people...,"

One teacher expands on this closed little world of the teacher and the instinctive nature to shy away from a joint venture of any sort with one's teaching colleague. He is explicit and pointed in his remarks but strikes at the heart of joint planning.

> "I don't know how other groups are cooperating but I would suspect that...there will be some people who will resist this sort of thing. It's the "BUNKER" mentality that develops in a school...I think that relationships between colleagues are more difficult to develop than a relationship between a teacher and student [why?] Fear...Fear of others judging your performance...A lot of people are used to this closing that door to the classroom and just being ignored...there is an element of fear, let's say stress, just to deal with the fact that someone else is making part of the decisions". [Mar.]

Cooperation between teachers is hard to achieve. Many teachers have diverse views of education, classroom management, discipline and teaching to name a few. No one is going to sit down and work out an agreement or understanding with another teacher unless there is definite payoff. The only payoff for the teacher in the Block Plan would be a smoother running, more efficient, and more effective program. A Block pair running a coordinated effort could have a good deal of impact on a group of kids. For some reason, most of the project teachers didn't see it this way. Perhaps the payoff isn't there. Perhaps it just takes more time to "get [their] act together." It is one thing for teachers to cooperate over a "set of materials" it is quite another to offer a coordinated program.

Reading and language arts.

Some of the teachers have expressed delight when referring to the interdisciplinary approach that occurs when teaching two subject areas. The direct cross-over that has occured between two subject areas has proven to be most valuable in improving on reading and language arts skills, no matter what subject area. One teacher explained this cross-over phenomenon.

> "When I am teaching math concepts in science, I am teaching them using the suitable terms for them for the first time. For example, I am teaching them to convert temperatures. When I am using that formula, I use the words in order of operations now. And remind them of the similar concept in math. So I am much better able to handle the science...I stress language a lot more. When the students go in a field trip for example, they are assigned an essay to write, which I ask the language teacher to mark. In my marks book I have a special section where I record things like on grammar, spelling terms, definitions...I mark grammar and neat writing now on tests...And I think that the kids know their science material better, now that they have to write it down descriptively..."

Although this teacher appears to dwell on matters that make good sense, these things have not been happening in grade seven classes elsewhere. The cross-over dimension has opened up

new possibilities. This teacher now has become, to a degree, a "more aware" teacher.

The differentiated support options.

The differentiated support option was an integral part of the program. Most project teachers were in agreement that the concept of the differented support option was a "good idea". Some project teachers did express the fear that although the DSO student appeared to be happier and was able to communicate his problems more effectively to the teacher and slight improvements in actual performance have been noticed, the overall collective impact over the academic year doesn't look too positive. One teacher comments

> "...They are learning something but not at the pace the others in the regular program are. They are still falling behind...they are learning more than they would otherwise, but they are not catching up..."[Feb.]

Similarly, another teacher states,

> "The principle of it is good. I think that I have trouble seeing anything coming out of it though. The kids I have in math (DSO) their basic computational skills have not improved all that much...the ones with the real problems...are still having a lot of difficulties..."[Feb.]

Another teacher views the effects of the DSO more positively. She has several students with personal problems which have caused difficulties in her work in the school.

> "Part of the problem is attitude. Just self-image...and I would say DSO is working because those kids need desperately that one to one relationship ...they are feeling that someone is actually paying attention to them. I feel that we can head-off a problem, when a problem develops" [Feb.]

Another observed a noteworthy improvement in DSO students' "social ability" and "concentration".

> "The DSO kids talk to me more in class, they are happier...they talk to more kids than they usually do. So their social ability has improved considerably. Their concentration skills have improved ...they can work for ten to fifteen minutes without having to get up and walk around...[but] in terms of actual tests they are still failing."

Teachers, then, were uncertain about the total impact of the DSO. There does not appear to have been much contact between the DSO teachers and the core teachers over specific difficulties of specific students. Any move in this direction would mean an improvement. Teachers often spoke in terms of judging the new program in relation to the former differentiated program. But here again the goals of the two differ. The former program focussed on a separate program of basic skills. The DSO sought to "support" students in the regular curriculum. This again could reflect on the project goals not being fully understood by teachers.

Student's reaction.

According to one administration, the transition from elementary to junior high school, with the aid of the alternative program, has been made as comfortable as is possible this year. Statistically speaking the number of exclusions this year has been reduced significantly among some project teachers, compared to the previous year. One school counselor agrees,

> "I think that there has been a noticeable decline in the number of kids being asked to leave the class, I think that teachers are tending now to work more with the students..."[Feb.]

Another school counselor stated that this year, project teachers have gone "out of their way to do things with their homerooms to create a certain atmosphere" which would help improve student attitude, reduce discipline problems and generally reduce achievement problems.

> "I noticed one teacher, for example, who is more involved with the students than ever, working on extracurricular activities...from a social aspect...I think that things are better. Grade seven home league is up this year over last, participation seems to be up...and I think the grade sevens are more involved really feel part of the school."

There is little doubt in the minds of those who have participated in the alternative program this year that their efforts have contributed to a happier, better adjusted grade seven student. The goals of the alternative program don't end here with the end of another year, but rather extend far beyond to other grades. Ultimately then the goal is to attempt to provide the optimum school environment to aid a child to realize his full potentials.

One of the most positive aspects of the program as perceived by the project teachers was that

> "grade seven students feel much more comfortable in the school...they seem to be quite happy and are really enjoying themselves.... The teachers obviously know the students better than before."

The students are happier this year because they are regarded by the teachers as human beings.

> "I ultimately look for changes that will occur in the human relationships. Those students relate to people, not to facts and concepts...and if they relate to the person, the rest will come...With this age group you have to like them and they have to perceive that and you have to be able to deal with them at their level as well as to try and raise them up to a sophisticated understanding of not only the subject but their world and how they fit into it." [Nov.]

The project teachers view of teaching - What is it?

> "Why is it important to know the kids you teach? Because we are dealing with human beings, we're not dealing with production units to be run-off an assembly line. I think that's the fundamental difference in view point that's coming out here. I don't believe students are simply units to be run through a grade, filled like little containers with X amount of information on certain subjects. And then spot-tested by the quality control people, at the end of the session and then say, 'Hey, we've educated someone'."

If this program has accomplished anything worth preserving it's the idea that teaching is a human activity. It would be so much more simple to adopt the attitude described by the teacher noted above. Too often we, as educators, take the easy way out, to be less caring, to be less involved, and less open-minded. We can easily build up those barriers around us, become inflexible and uncooperative to fellow educators; and not give of oneself to something that we can truly believe in. It's so much easier. It doesn't hurt, its safe and not as stressful this way.

One project teacher reflectively comments,

> "We must (see) education being the whole child and not just isolated segments that occur in a particular time slot in a particular discipline..." He continues "...at this stage we are dealing with young people who have a great deal of difficulty in just growing up. They have emotional and social problems they have to deal with..."

These students, as some project teachers have indicated have specific needs. These needs are ultimately connected with who they are and cannot be separated from the educative, life process that affect us all. There is a need to get to know that person both insde and outside the classroom.

> "The need for a student to interact with a teacher other than in the formal classroom type of situation is very great. They are modelling themselves after adults, and they need answers to a lot of questions...Teachers must take an active part in the life and development of their students and become sensitive to problems that they might have. And it's our job to deal with this..." [Oct.]

The project teachers have clearly become more aware of their students. By way of example, one teacher explains in his own way that kids are people too.

> "This morning one of my boys came up with this problem at home involving his younger brothers and he's getting into trouble and his folks put down their foot and he wanted to know what I thought of it. Just sorta asking another opinion. Quite a few of the things that I deal with outside of this regular class hour often have to do with personal problems of this nature. Growing up problems that the kids are having. And I like that. I think that this project is something that tends to encourage the student to seek the teacher...I think that you have that trusting relationship develop between a teacher and a student."

This trusting relationship can only develop by

> "getting to know the kids a little better. Being a lot more close and personal with them...That is, spending more time basically on their specific individual needs, as human beings first and students second."

With a trusting relationship thus established both student and teacher feel better. The student feels free to communicate any difficulties that he or she might have in class. The teacher, similarly is more aware of individual student problems and how best to deal with them. One teacher conveys his experiences on this notion

> "I know them better individually as a result of this program. They approach me more often with questions and comments, so we as a group, are much closer. The atmosphere is a lot different...Because I know them better and I know how to respond to them, I know how to respond to them as I never have before. I know how to respond to them individually if something goes wrong..." [Mar.]

In summary, then, more than anything else the project teachers have identified the fact that educators must be more than just 'teachers'. They must somehow be their student's friend, their confidant; someone with whom the problems of his world can be 'talked about'. An educator must in his own way, take an active part in the lives of his students.

Conclusions

An interpretation of the findings can be put together to make a coherent picture. In general we would like to know how the Block Plan affected the students who participated in it; how parents felt about it and how teachers reacted to it. The first set of conclusions deals with students.

STUDENTS

All of these conclusions refer to the comparison between the control groups [1979-80] and the treatment group [1980-81]. We have good reason to believe that the groups were comparable in ability as shown by the Canadian Cognitive Abilities Test. The groups differed in that the average class size of the control was 28-29 while the average size for the treatment was 26-27. The control and treatment groups resided in the same community. The major difference between the groups was in the treatment offered, the Block Plan.

Attitudes. The findings suggest that the treatment group had a better attitude than the control group. This was first of all shown in the improved attendance for the total group. The

patterns of exclusions indicated that teachers continued to use classroom exclusions as a means of punishment but the number had decreased dramatically all across the board - 50% overall and 45% for the low group. The changes of 20% for the high-average group was considerably smaller.

Students' attitude to general school matters [Barker-Lunn] was better for the treatment group. Especially strong in this changed attitude of the total group was the attitude to school and school work, their attitude to their class and how they felt others felt about them. The area which did not show to be significantly different was the student self-image (academic). Further analysis showed that the low group [approximately the lowest 35% in mathematics and language arts achievement] was responsible for most of this difference. The low group even had a better academic self-image in the treatment than in the control group.

Students' attitude to their class [social studies was the referent class] [My Class] was better for the treatment group. The two main aspects of the changed attitude was in satisfaction [enjoyment and pleasure] and cohesiveness [friend, play together]. Again the high-average groups only showed a difference on the combined satisfaction - cohesion while the low group show a difference on the five sub-scales in general and on the friction-competiveness combination. Further analysis showed an improvement in the friction component. So in general the total treatment group showed a better attitude to their class than the control in terms of more satisfaction, less friction, less competitiveness, less difficulty, and more cohesion. But the high-average group was more satisfied and more cohesive while the low group showed less friction. The reason for this difference between the better students and the slower students could be that better students are more apt to think of satisfaction and friends while slower students possibly think more of avoiding conflict [friction].

All together the attendance, exclusions, school attitude and class attitude all favour the treatment group with the low achievement group showing more of the effects.

Students' attitude to the subject areas of mathematics and language arts showed no difference between the control and treatment group on evaluation [liking], usefulness or difficulty. The no-change is an important finding in that the treatment of language art and mathematics was often by non-department teachers. On the other hand, the interdisciplinary aspect of the treatment might have promoted the usefulness component.

The student opinion survey indicates the principal being favoured more highly by the treatment group as was the school in general. This strong support by the treatment group for the administration [the vice principal showed fewer students dissatisfied with him] and the school is probably a result of students having much less punitive contact with the administration. [exclusions were down 50%]. All of the proportion of positive responses to these variables were about 80% which indicates the positive climate toward administration and the school.

Another important finding for the study was the smaller percentage of students in the treatment group dissatisfied with their teachers, and the smaller percentage dissatisfied with the behavior of others and the ways others treated them. Also relevant to the study is that a smaller percentage were dissatisfied with the options open to them. This is especially interesting in the light of the one option being used as the DSO for the slowest students.

The one finding which favoured the control group was the percentage of students dissatisfied with the counselor. This number was higher [25%] in the treatment group. This number is hard to explain because the grade seven class had very little contact with the counselor. It could be that some of them felt he wasn't doing his job. Other explanations of this phenomenon are not available at present. The counselor's personal comments in the Process Monitoring indicate that he was very pleased with the Block Plan.

Only the statistically significant differences[10] have been commented on above. One overall trend is that most of these significant differences appear in the "dissatisfied" column. The treatment group produced fewer dissatisfied people which could be interpreted as the treatment having greatest effect on the low group which coincides with the other attitudinal conclusions. Another overall comment is the generally more positive reaction of the treatment group. Although no statistical test was done for this, there is a generally more positive [less negative] reaction from the treatment group. The significant differences indicate this positiveness centres around the students' improved regard for the administration, the teacher and their classmates which is more support for the personal-social thrust of the Block Plan.

The overall attitudinal differences strongly favour the treatment group including better attendance, fewer classroom exclusions, better school attitudes, better class attitudes and better attitudes toward students, teachers and and administrators in the school. The high-average group shows somewhat less of this effect than the low group, but the effect is present in both

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[10] The significant difference on the "lunch arrangements" item reflects a motor improvement in physical arrangements for the noon period.

groups. One explanation of this differential effect is that the low group has more chance of scoring higher on the tests. That is, there is more room for growth. Another explanation is that slow students enjoyed the heterogeneous groups more, reacted more favourably to the DSO program than the previous differentiated program, benefited more from having fewer teachers and in general reacted well to many features of the Block Plan. The high-average group [top 65% of students] also showed better attitudes under the Block Plan than the departmentalized plan.

Achievement. It has been noted in the attitudinal portion of this section that no differences existed in the students' attitude to language arts and mathematics. We now look at achievement in mathematics, language arts and reading for the control and treatment groups. The only difference in achievements of the total group is the treatment group's better performance in reading, which is a comprehension score. Looking at the high-average group only, the control group scored significantly better in language arts *but* only on the total test not on the part of the test considered "basic language arts skills." The low treatment group however scored significantly better than the low control group on all achievement tests except the mathematics survey test. The slow learners [a sub-group of the low group] showed differences in favour of the treatment group on the Math Survey, L.A. sub-score and reading. [Slow learners did not write the L.A. total test.]

The results, then, on achievement are mixed. The top 65% of the students in the grade do better under the departmentalized treatment in language arts while the two bottom groups in the treatment did better in everything [border line cases in mathematics]. The DSO program does seem to be supported in both mathematics and language arts.

PARENTS

Being informed about their child and class size were the only two significant differences in parent opinion both favouring the treatment group. Being informed about their child is completely in line with the goals of the Block Plan. The class size issue is not clear. A difference of classes from 28-29 to 26-27 can hardly be that noticeable. One explanation is that class size could be a factor that parents would focus on if they were unhappy with the child's social atmosphere in school. Under this explanation the positiveness and lack of negativeness about class size could be an indication that parents felt good about classroom social atmosphere in the treatment group.

Interestingly, the parents' opinion about the teaching of the academic core subjects show a favourable response to the control group. None of the items are significant but it probably means parents felt slightly uneasy about the innovations even if attitude and achievement gains were evident. Overall the Block plan seems to have had very little effect on the parents' outlook. This is indeed surprising considering the success of the Block Plan in terms of student variables.

TEACHERS

The meager data we have on attendance favours the Block Plan. If, on average, a teacher misses 3.65 days fewer, over 8 teachers, it means, 29 days per year fewer substitute-days. It also probably means teachers are working in a less stressful situation.

The teachers did not change much in attitude to the concepts tested. The overall trend is toward being more positive and toward thinking these concepts are less significant than they thought before the project started. School suspensions were thought to be less significant.

DSO

Although none of the product monitoring dealt specifically with the differentiated support option, the better attitude and achievement performance of the low group and the slow-learner group in the treatment over the control is strong support for the DSO as a concept. One side effect is the loss of an option to the differentiated students. We have no evidence to suggest how serious a loss this was. One way of evaluating this loss is to look at what option would normally be taken by these students. It would probably have been art, calligraphy or, in fact, remedial mathematics. Is the improved performance in language arts and mathematics and an improved attitude in general, sufficient to compensate for the lost option? This is certainly a question of goals, not of "product" evaluation. Another side effect is the benefit of this arrangement of the DSO for the whole grade seven class. It allows heterogenous grouping which in our study resulted in improved attitudes for the whole grade seven group.

Part of the success of the DSO is the flexibility of assigning students in or out of the DSO. Also cost in terms of teacher-hours are reduced over the previous plan. However, more important than any of these considerations is that the DSO system offers a very different course than the previous differentiated program. The latter offered a separate course which probably focussed much more on basic skills of mathematics and language arts. The DSO

systems gives the student a total grade seven curricular program. It is almost certain that the curricular differences between a "basic skills" program and a total curriculum program are very great. Which is the better experience for the slow learner can only be argued from some fundamental principles of educational purpose. The product monitoring suggests that the DSO group performed better on basic skills than their counterparts in the control group.

PROCESS CONCERNS

Although the Report on Process Monitoring speaks for itself several reactions from the "project" would seem to be in order. First, implementation is recognized to be a difficult issue. The changes being sought other than the superficial structural ones of the Block Plan were basic. The "product monitoring" results would indicate that indeed teachers had presented an adequate program well within the guidelines of the goals of the Block Plan.

Choosing partners is severely limited by the necessity of matching eight teachers. Working cooperatively is bound to be perceived as problematic. We should be pleased that we have evidence of a considerable amount of cooperation. The point is that cooperation was not mandatory, only a potentially beneficial possibility. The workshops could have put much greater emphasis on this aspect.

The feeling of "isolation" probably only existed because teachers traditionally perceive a loyalty to school as an institution. Teachers should be prepared to abandon institutional loyalties for student [individual] loyalties. Is it not possible for teachers to develop a feeling of belonging within grade seven? Why is grade nine perceived to be the ultimate level in junior high school? Could grade seven teachers ever feel as a group that they could have "graduation" from grade seven?

The several other "themes" in the report attest to the fact that there is much going on in the Block Plan and in teaching in general. Does a student have to "like" a teacher? What amount of contact between teacher and class promotes "knowing each other better" as opposed to boredom. Many people are not "bored" with their families after 10, 15 or 25 years.

The "product monitoring" results indicate that many good things must have happened. The "process monitoring" results indicate much improvement and greater understanding of the process is possible. Cooperation and joint planning would seem to be areas virtually unexplored. Even realizing the full potential of the DSO appears to be worth all the effort possible.

The process monitoring achieved one goal above all others. It has placed a lot of responsibility on any innovators of block systems of instruction to pay attention to mechanisms of how teachers go about adapting to the innovation. How should they plan jointly, cooperate, use the DSO, counsel, integrate subjects, and so forth? If the innovators don't have these answers, they at least have to provide support structures to help teachers find their own answers.

Indeed, what commitment does the school have to affective education? Does the commitment only exist to the extent that the principal doesn't see too many students in his office? Does it only exist for the sake of facilitating academic achievement? Or is affective education an end in itself? The Block Plan seems to beg the question. Developing a commitment to affective concerns would seem to be fundamental to any process developments.

Our study suggests the pay off is here! We need now to improve the process.

Recommendations

The effect of the Block Plan on the grade seven students at Edith Rogers was overall very positive. Although the reading achievement showed dramatic change, there seems to be a trade-off for language arts (and mathematics) performance of the "average and better" students. If the "average and better" students could be instructed in a manner that would overcome this trade-off, the program would be a very positive step forward. The Differentiated Support Option program in both language arts and mathematics produced higher grades for the low and problem-learner groups both in general curricular content and in basic skills. The results for problem learners in language arts are particularly strong.

The positive results seem to spread beyond the classroom to include the students' satisfaction with teachers and administration. In a typical junior high school where many adolescents are going through an authority-peer conflict, the benefit of a more positive social-personal atmosphere cannot be underestimated.

There is no indication in the present data as to which aspects of the Block Plan contributed to the success of the program. It may be possible to expand the Block Plan to include more of the total instructional program, not just the academic core. There is no reason why the Block Plan could not be extended into grade eight with equally positive results.

It is highly recommended that junior high schools which have a group of students, say 15%, in the category of problem learners, and which are experiencing attitudinal or morale problems, consider some form of block instruction. Schools clearly have a commitment to the attitude of students, to their social-personal well being and to developing a positive atmosphere in which youngsters can grow. A block system of instruction can promote that, with a substantial gain in learning for the bottom 35% and with very little less in learning for the higher groups.

FURTHER RESEARCH

1. The trade-off in achievement for the average and better students should be investigated. Instructional development for dealing with the better students in mixed-ability classes could be undertaken.
2. We need to know more about helping teachers to work cooperatively, especially in regard to counseling and instructional development.

3. The differentiated support option program should be studied in detail to understand its goals and processes.
4. Interdisciplinary units need to be developed, implemented and critiqued. They appear to have considerable potential but they do represent a significant departure from common instructional procedures.
5. The block system should be tried in several different types of junior high school at all grade levels using a similar assessment to the present study.
6. The whole area of instruction in the block system needs further work especially on variables such as longer periods, helping slow students, overlapping subject areas and community resources.
7. Curricular analysis of the school and its commitment to social-personal goals and their relationship to the more traditional cognitive goals should be undertaken.

REFERENCES

1. Anderson, G.S. and Cayne, R.E. *My Class Inventory*. (rev. ed.) Halifax, N.S.: Atlantic Institute of Education, 1969.

2. Anderson, G.J. *The assessment of learning environments: a manual for the Learning Environment Inventory and the My Class Inventory*. Halifax, N.S.: Atlantic Institute of Education, 1973.

3. Barker-Lunn, J.C. *Manual of Instruction for use of Primary Children's Attitude Scales*. Slough, Buckinghamshire: National Foundation for Educational Research, 1971.

4. Barker-Lunn, J.C. *Primary Children's Attitude Scale*. Slough, Buckinghamshire: National Foundation for Educational Research, 1971.

5. Bell, James B. and Peter Ackerman *The Early Adolescent and the Junior High School Curriculum*. Occasional Paper No. 13, Department of Secondary Education, University of Alberta, 1979.

6. Calgary Public School Board *The Final Report of the Junior High School Program Commission*, 1972.

7. Draud, Jon E. "The Relationship between the Organizational Structure of Middle Schools and Junior High Schools and its Effect on the Attitude of Teachers and Students Toward the School." *The Middle School Research Annual*, Fairborn, Ohio: National Middle School Association, 1977-78, pp. 1-16.

8. Dunkin, M.J. and Bruce Biddle *The Study of Teaching*. Holt, Rinehart and Winston, 1974.

9. Edmonton Public School Board *Kenilworth Survey*, 1980 (mimeograph).

10. Educational Research Services *Summary of Research on Middle Schools*, 1975.

11. Erb, Thomas Owen "A Comparison Study of Junior High Schools and Middle Schools in the State of Kansas". *The Middle School Research Annual*, Fairborn, Ohio: National Middle School Association, 1979-80, pp. 84-91.

12. Fasano, James H. *Pupil Characteristics and Teacher-Pupil Dyadic Interaction*, Unpublished Ph.D. Thesis, University of Alberta, 1977.

13. Ferguson, G.A. *Statistical Analysis in Psychology and Education*, Fourth Edition, McGraw-Hill, 1976.

14. Good, T. and G. Brophy *Looking into Classrooms*, Harper and Row, 1978.

15. Gordon, Jeffry S. "A Comparison of the Attitudes of Elementary, Middle and High School

Teachers" *The Middle School Research Annual*, Fairborn, Ohio: National Middle School Association, 1977-78, pp. 17-27.

16. Mahen, Robert G. *Relationships Between Students' Classroom Behaviours and Selected Context, Process, and Product Variables*, Unpublished Ph.D. Thesis, University of Alberta, 1977.
17. Manitoba Department of Education "Education in the Middle Years", Interim Draft, 1977.
18. McEwen, Ken, William E. Blanton, M. Joan Terry "An Exploration of Self Concept, Attitude toward Curriculum and Academic Achievement in the Middle School," *The Middle School Research Annual*, Fairborn, Ohio: National Middle School Association, 1979-80, pp. 1-8.
19. Minister's Advisory Committee on Student Achievement *School Subjects Attitude Scales, Technical Report*, Alberta Education, 1978.
20. Moody, Peter R., *Descriptive Studies of Six Children in their classroom contexts*, Unpublished Ph.D. Thesis, University of Alberta, 1980.
21. National Middle School Association *Middle School Research, Selected Studies, 1978-80*, Fairborn, Ohio: 1980.
22. National Middle School Association *Middle School Research Studies, 1980*, Fairborn, Ohio: 1980.
23. Osgood, C., G. Suci, and P. Tannenbaum *The Measurement of Meaning*, Urbana, Ill.: University of Illinois Press, 1957.
24. Red Deer, County of *Junior High School Climate*, 1978 (mimeographed).
25. Saskatchewan Teacher's Federation, Report of the *Middle Years Study*, 1978.
26. Sweat, Clifford H. *Why the Junior High/Middle School? Its Basic Functions*, Junior High School Association of Illinois, 1977, pp. 17-19.

APPENDIX

List of testing instruments used. Asterisk (*) indicates that a copy of the instrument is contained in this appendix.

1. *Canadian Cognitive Abilities Test*, Thomas Nelson and Sons, 1974.
2. *Canadian Test of Basic Skills, Form 3M, Metric Edition*, Thomas Nelson and Sons, 1974.
3. *Edmonton Public Schools, Junior High Mathematics Survey Test, Grade Seven, Form 1, Part 1 and Part 2*, March 1976.
4. *Edmonton Public Schools, Elementary Mathematics Survey Test*, January 1979.
*5. *Edmonton Public Schools, Parent Opinion Survey*, 1980, 1981.
6. *Edmonton Public Schools, Elementary Reading Test*, January 1979.
*7. *Edmonton Public Schools, Student Opinion Survey*, 1980, 1981.
8. "Language Arts Final" - developed by the language arts department of Edith Rogers School, June 1980.
9. "Mathematics Year-End Computation" - developed by the mathematics department head of Edith Rogers School, June 1980.
*10. *My Class* - developed by Gary J. Anderson, Atlantic Institute of Education, Halifax, Canada, 1971.
*11. "School Attitude Scale" - based on *Primary School Attitude Scales* developed by Joan Barker-Lunn, National Foundation for Educational Research, 1966.
*12. *School Subject Attitude Scales* - developed by V. Nyberg and S. T. Clarke, Minister's Advisory Committee on Student Achievement, Alberta, May 1979.
*13. *Teacher Test of Attitude* - developed by the present study.

EDMONTON PUBLIC SCHOOLS, PARENT OPINION SURVEY

EDMONTON PUBLIC SCHOOLS WOULD LIKE YOUR VIEWS.....

This questionnaire asks your feelings and opinions about your child's school. In order to keep costs down, we are sending it to a random sample of parents. But to get reliable results we will need responses from all of the sample. Each questionnaire has been numbered so that we can determine who has not returned the completed questionnaire. The parents who have not responded will be followed up by telephone to obtain a response from everyone. Returning your questionnaire promptly by mail will reduce the number of telephone follow-up calls needed.

We will treat your responses completely confidentially. The report will contain only statistical summaries and anonymous comments, without identification of individual respondents. A prepaid envelope is enclosed for your convenience - - just drop it in a mailbox - - it doesn't need a stamp. THANK YOU - - your participation is very much appreciated.

Dr. H. Mosychuk
Assistant Superintendent Monitoring Systems,
Edmonton Public Schools,
429-5621 Ext. 370

_____ _____ JUNIOR HIGH

For each item below place a check mark in the appropriate square according to how you feel about the question.

		YES	NO	UNDECIDED	INSUFFICIENT INFORMATION
1.	Are you satisfied with the way the school is handling each of the following programs(emphasis, content, quality of instruction, etc.)?				
	(a) Language Arts/English	☐	☐	☐	☐
	(i) Reading/Writing/Speaking/Listening	☐	☐	☐	☐
	(ii) Vocabulary/Spelling/Grammar	☐	☐	☐	☐
	(b) Mathematics	☐	☐	☐	☐
	(c) Science	☐	☐	☐	☐
	(d) Social Studies	☐	☐	☐	☐
	(e) Physical Education	☐	☐	☐	☐
	(f) Second Languages	☐	☐	☐	☐
	(g) Fine Arts (Music/Art/Drama)	☐	☐	☐	☐
	(h) Health/Perspectives for Living	☐	☐	☐	☐
	(i) Industrial Arts/Home Economics	☐	☐	☐	☐
	(j) Group "B" Options	☐	☐	☐	☐
2.	Do you feel student discipline is being handled well at the school?	☐	☐	☐	☐
3.	Do you feel your child likes school?	☐	☐	☐	☐
4.	Do you feel the school system is using its money in a reasonable manner?	☐	☐	☐	☐
5.	In general, are you satisfied with:				
	(a) your child's teacher(s)	☐	☐	☐	☐
	(b) the school Principal	☐	☐	☐	☐
	(c) the Associate Superintendent of Schools for your Area	☐	☐	☐	☐
	(d) the Superintendent of Schools	☐	☐	☐	☐
	(e) the Board of Trustees	☐	☐	☐	☐
6.	Do you feel welcome at the school?	☐	☐	☐	☐
7.	Do you feel you have an adequate voice in school decisions that affect your child?	☐	☐	☐	☐
8.	Do you feel you are being satisfactorily informed about your child's learning progress?	☐	☐	☐	☐
9.	Are you satisfied with the guidance and counseling services at the school?	☐	☐	☐	☐
10.	Are you satisfied with the extracurricular programs offered at the school(sports, school plays, concerts, clubs, etc.)?	☐	☐	☐	☐
11.	Are you satisfied with the way attendance is handled at the school?	☐	☐	☐	☐
12.	Do you feel the non-teaching employees at the school, such as secretaries, aides and custodians, are helpful and friendly?	☐	☐	☐	☐
13.	Do you feel that the number of pupils in your child's classes is appropriate?	☐	☐	☐	☐
14.	Generally, are you satisfied with your child's school?	☐	☐	☐	☐
15.	Are you satisfied with the assistance provided by the school to you and your child in planning for high school and career?	☐	☐	☐	☐

Is there anything else you would like us to communicate to the Board or Administration?

PLEASE USE THE OTHER SIDE OF THIS QUESTIONNAIRE FOR YOUR COMMENTS.

1980

EDMONTON PUBLIC SCHOOLS

GRADES 7 - 9

...how you feel about school. Please check the box which best describes your feelings about the following:

		I'm satisfied	I'm dissatisfied	I'm not sure
1.	The number of option courses open to you	☐	☐	☐
2.	The usefulness of your courses	☐	☐	☐
3.	The emphasis on basic skills (such as reading, writing, math)	☐	☐	☐
4.	Your homework assignments	☐	☐	☐
5.	How much you are learning	☐	☐	☐
6.	How your marks in the courses are determined	☐	☐	☐
7.	What the school tells your parents about how you are doing in school	☐	☐	☐
8.	Your principal	☐	☐	☐
9.	Your assistant principal	☐	☐	☐
10.	The office staff	☐	☐	☐
11.	Your teachers	☐	☐	☐
12.	Your counselor	☐	☐	☐
13.	High school and career planning assistance	☐	☐	☐
14.	The say that you have in school decisions that affect you	☐	☐	☐
15.	The way student discipline is handled	☐	☐	☐
16.	The behavior of other students in class	☐	☐	☐
17.	The behavior of other students out of class	☐	☐	☐
18.	School rules and regulations	☐	☐	☐
19.	The way other students treat you	☐	☐	☐
20.	How attendance problems are handled	☐	☐	☐
21.	The opportunity to get into the classes that you would like	☐	☐	☐
22.	Lunch arrangements	☐	☐	☐
23.	The extracurricular program (sports, school plays, concerts, clubs, etc.)	☐	☐	☐
24.	The Students' Union or Council	☐	☐	☐
25.	The school buildings, grounds and equipment	☐	☐	☐
26.	The way you get to and from school	☐	☐	☐
27.	The interest that your teachers have in you	☐	☐	☐
28.	Your chances for succeeding in your courses	☐	☐	☐
29.	The number of pupils in your classes	☐	☐	☐
30.	The length of your class periods	☐	☐	☐
31.	Your school in general	☐	☐	☐

Is there anything else you would like us to communicate to the Board or Administration?
PLEASE USE THE OTHER SIDE OF THIS QUESTIONNAIRE FOR YOUR COMMENTS

1981

my class

NAME _____

CLASS _____

DIRECTIONS

This is not a test. The questions inside are to find out what your class is like. Please answer all the questions.

Each sentence is meant to describe your class. If you agree with the sentence circle yes. If you don't agree with the sentence, circle no.

Example

	Circle Your Answer
1. Most kids in the class are good friends.	Yes No

If you think that most kids in the class are good friends, circle the yes like this:

1. Most kids in the class are good friends.	(Yes) No

If you do not think that most kids in the class are good friends, circle the no like this:

1. Most kids in the class are good friends.	Yes (No)

Now turn the page and answer all the questions about your class.

		Circle Your Answer	
1.	The pupils enjoy their schoolwork in my class.	Yes	No
2.	Students are always fighting with each other.	Yes	No
3.	The same people always do the best work in our class.	Yes	No
4.	In our class the work is hard to do.	Yes	No
5.	My best friends are in my class.	Yes	No
6.	Some of the kids in our class are mean.	Yes	No
7.	Most pupils are pleased with the class.	Yes	No
8.	Pupils often race to see who can finish first.	Yes	No
9.	Many kids in the class play together after school.	Yes	No
10.	Most students can do their schoolwork without help.	Yes	No
11.	Some pupils don't like the class.	Yes	No
12.	Most students want their work to be better than their friend's work.	Yes	No
13.	Many kids in our class like to fight.	Yes	No
14.	Only the smart people can do the work in our class.	Yes	No
15.	In my class everybody is my friend.	Yes	No

		Circle Your Answer	
16.	Most of the kids in my class enjoy school.	Yes	No
17.	Some pupils don't like other pupils.	Yes	No
18.	Some pupils feel bad when they do not do as well as the others.	Yes	No
19.	In my class I like to work with others.	Yes	No
20.	In our class all the pupils know how to do their schoolwork.	Yes	No
21.	Most kids say the class is fun.	Yes	No
22.	Some people in my class are not my friends.	Yes	No
23.	Students have secrets with other students in the class.	Yes	No
24.	Pupils often find their work hard.	Yes	No
25.	Most students don't care who finishes first.	Yes	No
26.	Some students don't like other students.	Yes	No
27.	Some pupils are not happy in class.	Yes	No
28.	All of the students know each other well.	Yes	No
29.	Only the smart pupils can do their work.	Yes	No
30.	Some pupils always try to do their work better than the others.	Yes	No

		Circle Your Answer	
31.	Pupils seem to like the class.	Yes	No
32.	Certain pupils always want to have their own way.	Yes	No
33.	All pupils in my class are close friends.	Yes	No
34.	Many pupils in our class say that school is easy.	Yes	No
35.	In our class some pupils always want to do best.	Yes	No
36.	Some of the pupils don't like the class.	Yes	No
37.	Kids in our class fight a lot.	Yes	No
38.	All of the pupils in my class like one another.	Yes	No
39.	Some pupils always do better than the rest of the class.	Yes	No
40.	Schoolwork is hard to do.	Yes	No
41.	Certain pupils don't like what other pupils do.	Yes	No
42.	A few students in my class want to be first all of the time.	Yes	No
43.	The class is fun.	Yes	No
44.	Most of the pupils in my class know how to do their work.	Yes	No
45.	Kids in our class like each other as friends.	Yes	No

This instrument was developed at Harvard University by Gary J. Anderson and Herbert J. Walberg, May 1968. Revised, January 1969, by G.J.Anderson and Ronald E. Cayne, Faculty of Education, McGill University.

SCHOOL ATTITUDE SCALE

STRICTLY CONFIDENTIAL

THIS WILL NOT BE SHOWN TO YOUR TEACHER OR PRINCIPAL

We have been talking to many boys and girls of your age. They have told us what they like and what they dislike about school.

Over the page you will see some of the things they have said. We would like to know what you feel and think about these things - whether you agree or disagree with what other boys and girls have said.

This is NOT a test and there are NO RIGHT and NO WRONG answers.

We want you to answer as truthfully as you can. Just say what you think is most true of you.

Your answers will be strictly confidential; this means we won't tell anyone your answers.

Here is an example:

A. I like watching television

YES, OFTEN	SOMETIMES	NEVER

If you often like watching television, put an X in the box marked often.

Here is one for you to try:

B. I like playing football

YES	NOT SURE	NO

Name _____

Class _____

1. If I missed a gym lesson I would be disappointed	Yes	Not Sure	No		
2. I'm sorry when school is over for the day	Always	Sometimes	Never		
3. It's nice to fool around in class	Often	Sometimes	Never		
4. Teachers get on well with me	Most of the time	Sometimes	Hardly ever		
5. I get a lot of math questions wrong	Yes,often	Sometimes	Hardly ever		
6. When the teacher goes out of the room I play around	Always	Sometimes	Never		
7. I think I'm pretty good at school work	Yes	Not Sure	No		
8. School lessons are boring	Most of the time	Sometimes	Never		
9. My class is nicest of all	Yes	Not Sure	No		
10. I have no one to play with after school	True,often	Sometimes	Never		
11. I would like to be better at gym than at school work	Yes	Not Sure	No		
12. We spend too much time doing math	Yes,often	Sometimes	Hardly ever		

13. I'd rather be in my class than the other classes for my grade	Yes	Not Sure	No		
14. I sometimes think I'm no good at anything	Yes,true	Not Sure	False		
15. Other classes think we're nice in my class	Yes	Not Sure	No		
16. I think a lot of students in my grade would like to be in my class	Yes	Not Sure	No		
17. My teachers think I'm clever	Yes	Not Sure	No		
18. I bet going out to work is better than school	Yes	Not Sure	No		
19. I shall be sorry to leave my class	Yes	Not Sure	No		
20. I'm scared to ask my teachers for help when I don't understand	Yes,often	Sometimes	Never		
21. I have no friends I like very much in my class	Yes, true	Not Sure	False		
22. I like people who get me into mischief	Yes	Not Sure	No		
23. I like doing hard math questions	Yes, often	Sometimes	Never		
24. Teachers are always nagging me	Yes	Not Sure	No		

25. School is boring	Always	Sometimes	Hardly ever		
26. I'm happy to be in the class I'm in now	Yes	Not Sure	No		
27. School work worries me	Yes	Not Sure	No		
28. I feel scared when teachers ask me questions about my work	Yes, often	Sometimes	Never		
29. Other students think we're very clever in my class	Yes, true	Not Sure	False		
30. When we have tests I get very good marks	Most of the time	Sometimes	Hardly ever		
31. We have interesting lessons in school	Most of the time	Sometimes	Hardly ever		
32. Students who can't do their schoolwork feel ashamed	Yes	Not Sure	No		
33. I dislike kids who are noisy in class	Yes	Not Sure	No		
34. I hate being in the class I'm in now	Yes	Not Sure	No		
35. I like pupils who get into trouble	Yes	Not Sure	No		
36. Teachers are interested in me	Yes	Not Sure	No		

37. My class gets blamed for things we don't do	Yes, true	Not Sure	False		
38. I would feel a little afraid if I got my spelling or math questions wrong	Yes	Not Sure	No		
39. I think the other students in my class like me	Yes	Not Sure	No		
40. I'd prefer to be in another class	Yes	Not Sure	No		
41. School is fun	Always	Sometimes	Hardly ever		
42. I find a lot of school work is difficult to understand	Yes, often	Sometimes	Hardly ever		
43. I would like to be one of the cleverest pupils in the class	Yes	Not Sure	No		
44. I work and try very hard in school	Always	Most of the time	Some-times		
45. I'm very good at doing mathematics questions	Always	Sometimes	Hardly ever		
46. I don't always get on well with some of the students in my class	Yes, true	Not Sure	False		
47. I enjoy most school work	Yes	Not Sure	No		
48. Going to school is a waste of time	Yes	Not Sure	No		

49. My teachers are nice to me	Most of the time	Sometimes	Hardly ever		
50. I'm useless at school work	Yes, often	Sometimes	Never		
51. Teachers think I'm a trouble-maker	Yes	Not Sure	No		
52. I would like to be very good at school work	Yes	Not Sure	No		
53. Other children make fun of my class	Often	Sometimes	Never		
54. I think my teachers like me	Yes	Not Sure	No		
55. When people ask what class I'm in I always feel happy to tell them	Yes	Not Sure	No		
56. I like school	Yes	Not Sure	No		
57. I don't seem to be able to do anything really well in school	Yes, true	Not Sure	No		
58. It would bother me if I got my work wrong	Yes	Not Sure	No		
59. I like being in my class	Yes	Not Sure	No		
60. I would leave school tomorrow if I could	Yes	Not Sure	No		

61. I enjoy being asked questions by my teacher	Yes	Not Sure	No		
62. Other classes think they're better than us	Yes	Not Sure	No		
63. Doing well at school is most important to me	Yes	Not Sure	No		
64. At school they make you do things you don't want to do	Yes	Not Sure	No		

A. Which class would you rather be in at your school? _____

B. Why? _____

SCHOOL SUBJECT ATTITUDE SCALES

Subject Rated

Class _____

Please place only one mark between each pair of words. Be sure not to leave out any of the pairs.

very much / a bit / neither / a bit / very much

nice ___ ___ ___ ___ ___awful

boring ___ ___ ___ ___ ___interesting

unpleasant ___ ___ ___ ___ ___pleasant

dislike ___ ___ ___ ___ ___like

bright ___ ___ ___ ___ ___dull

dead ___ ___ ___ ___ ___alive

lively ___ ___ ___ ___ ___listless (inactive, lazy)

exciting ___ ___ ___ ___ ___tiresome (makes a person feel tired)

useless ___ ___ ___ ___ ___useful

important ___ ___ ___ ___ ___unimportant

impractical ___ ___ ___ ___ ___practical (useful or workable)

worthless ___ ___ ___ ___ ___valuable

helpful ___ ___ ___ ___ ___unhelpful

unnecessary ___ ___ ___ ___ ___necessary

harmful ___ ___ ___ ___ ___advantageous (brings good or gain)

meaningful ___ ___ ___ ___ ___meaningless (doesn't make sense)

hard ___ ___ ___ ___ ___easy

light ___ ___ ___ ___ ___heavy (a lot of work)

clear ___ ___ ___ ___ ___confusing (mixes a person up)

complicated ___ ___ ___ ___ ___simple

elementary ___ ___ ___ ___ ___advanced (beyond the beginning level)

strange ___ ___ ___ ___ ___familiar

understandable ___ ___ ___ ___ ___puzzling (hard to understand)

undemanding ___ ___ ___ ___ ___rigorous (has to be exactly right)

TEACHER TEST OF ATTITUDE

The following concept relates to a typical grade seven. How do you feel about

Parents

Please place one mark between each pair of words. Be sure not to leave out any pairs.

	very much	a bit	neither	a bit	very much	
nice	===	===	===	===	===	awful
boring	===	===	===	===	===	interesting
soft	===	===	===	===	===	hard
like	===	===	===	===	===	dislike
passive	===	===	===	===	===	active
fast	===	===	===	===	===	slow
heavy	===	===	===	===	===	light
relaxed	===	===	===	===	===	tense
exciting	===	===	===	===	===	tiresome
strong	===	===	===	===	===	weak
unpleasant	===	===	===	===	===	pleasant
clear	===	===	===	===	===	hazy